LAND FOR WILDLIFE

Newsletter of the Land for Wildlife Scheme in Alice Springs Municipality, NT November 2007

Land for Wildlife Update

Welcome to the November 2007 edition of the Land for Wildlife newsletter for Alice Springs. We now have 56 properties registered with Land for Wildlife and 10 properties currently working towards registration. We have had a number of Land for Wildlife members move interstate and we look forward to registering the new property owners in the near future. Please let your friends and neighbours know about Land for Wildlife . Information is available at www.lowecol.com.au, or call Heidi on 8955 5222.

Conservation Volunteers Australia (CVA) have joined in on the environmental property survey side of the Land for Wildlife scheme with a team booked to attend 4 property surveys in mid December. The team will assist Bill and myself with the property assessments and will spend an afternoon working on particular areas within the property i.e. weeding, clearing a fire break, laying irrigation, building fences around remnant vegetation etc. If you require assistance with on ground works to protect remnant vegetation or reduce threatening processes on your property please contact Heidi.

Landcare Carbonsmart Nature Conservation Merit Award Winners!

Congratulations to all Land for Wildlifers for winning this important conservation award. The award recognises the Land for Wildlife group for excellence and innovation in implementing nature conservation activities on land outside formal parks and reserves. LfW continues to contribute to the protection of rare, threatened or endangered ecosystems, species and remnant bushland ecosystems and habitat for wildlife and works towards registering properties that might provide habitat for rare and threatened species and ecosystems.

Land for Wildlife has been very successful over the past few months with a number of different funding applications approved. The main one being for the Regional Investment Strategy for National Heritage Trust (RIS07-10). The RIS07-10 will see the Land for Wildlife scheme with close to $70,000 for 2008 and possibly the same again for 2009-10 depending on funding availability.

This means that there will be funds for continued biodiversity surveys and training of volunteer extension officers to assist with the registration and reassessment of Land for Wildlife properties. This will provide an opportunity for reviewing property progress and to share information for effective property improvement techniques. If you are interested in learning how to conduct the property member assessments and reassessments, please contact Heidi as we are looking for two dedicated volunteers to continue recruiting members and encouraging best practice land management on private land.

The funding will also enable investigation into formal conservation covenanting for member properties. The funding will allow the scheme to expand its membership to outside the Alice Springs municipality, increase its capacity to develop and manage conservation projects and increase collaborations with potential partners for awareness raising and capacity building of Land for Wildlife members to protect Natural Resource Management assets.

We have also received funding from Australia Post Landcare to reprint the Land for Wildlife brochures and to promote of the scheme. A Volunteer Small Equipment Grant has also provided funds for equipment to assist with open days which allows further awareness raising activities to be achieved.

Thank you to the funding bodies for this valuable support and thanks to Land for Wildlife members for providing the base from which to develop the program.

Happy reading!
Heidi Groffen and Bill Low
Land for Wildlife Coordinators

Workshops

National Tree Day

Peter Latz discussing Buffel grass control techniques within the 20 acre block.

July 29th was National Tree Day, 30 members attended a tour of Botanist Peter Latz's property. The informative walk around the property, provided members with examples of Buffel grass *Cenchrus ciliaris* control that Peter has trialled on the block over the past 10 years.

In the early days, Peter was concerned about potential fires coming through the property. The fires would have been high intensity due to the high fuel load of Buffel grass. This was the start of years of Buffel grass control trials.

The property management techniques –

- Spray with Glyphosate.
- Leave the Buffel grass in the ground so as not to disturb the soil.

Prior to the widespread dominance of Buffel grass, the local flora had a remarkable capacity to regenerate after most temporary forms of disturbance. The situation today is quite different as Buffel grass is favoured by disturbance and has a competitive edge over most native species in most habitats (Albrecht and Pitts 2004). Leaving Buffel grass in the ground prevents further disturbance and conditions the soils by providing a mulch layer to assists with water retention and increases moisture levels. Organic matter in the soil from the decaying roots provides food for the many in ground termites.

Peter further minimised disturbance using the following techniques;

- Fencing the property from rabbits and euro's to reduce soil disturbance and to prevent seedlings from being grazed.
- Minimising disturbance on tracks and low vegetated locations by not walking on the regenerating areas. This allows soil stablisers such as cryptogams (soil crusts) to grow.

See the Bush Detective section of this newsletter to gain a better understanding of cryptograms.

Interestingly, Peter found that shrubs dominated the regrowth vegetation over the 20 acre block as opposed to native grasses. This may be related to the added carbon in the soil from the dead Buffel grass mulch as well as its moisture holding capacity.

The tour was very informative, providing insight into control methods that condition soils as well as decreases high intensity fire risks. Peter has now returned his precious photo collection from town back to the property now that the risk of fire has decreased.

A big thank you to Peter Latz for allowing us to tour the property, for sharing your knowledge and for increasing our understanding of Buffel grass control methods and the regeneration of the native seed bank.

References

Albrecht, D., and Pitts, B. (2004) *The Vegetation and Plant Species of the Allice Springs Municipality, Northern Territory.* Greening Australia and the Department of Infrastructure, Planning and Environment, Alice Springs.

Bats

Last November, a Bat identification workshop was held at Wangardi Caravan Park. Due to a high number of expressions of interest on this topic, another workshop will be held in collaboration with the Field Naturalist Club on 6th December at the Telegraph Station at 6:45pm till 9:00pm.

The workshop will include demonstrations of the different identification methods used for surveying Bats. A slide show will be presented by Michael Barritt about Central Australian bats. Bob Reid hopes to have an example bat box ready for you to view and we may even have a Harp Trap set up to show you how bats are monitored during biodiversity surveys with the NT National Parks and Wildlife Services.

Refer to the January 2007 newsletter for information about the previous workshop and bat detection results.

Please let me know in advance if you are interested in attending the bat identification night.

Weed and landscape management plan Workshop

Want to improve habitat for wildlife on your property? Do you know what this involves and what steps to take? Come along to this workshop and develop a Weed and Landscape Management Plan for your block. We will discuss tactics and strategies, and help you develop your own management plan, which will save you time and money at your place. Local experts will be on hand to answer your questions. People attending previous workshops have been

able to focus on their particular goals and problems so if you haven't attended a workshop yet, or would like a refresher, put the date for the next workshop in your diary. The workshop will be held in February 2008, so you have plenty of time to think about what you would like to weed, restore and landscape on your block. Please let me know if you would like to attend this workshop and stay tuned for further details as I will send out an invitation flyer in January 2008.

Practicalities

Sweet Kisses, Eternal Life – Mistletoe in Alice Springs

By Tim Collins, Alice Springs Desert Park

Mistletoe is the common name applied to a group of parasitic shrubs attached to tree branches. Different species of Mistletoe occur around the world with about 85 species of Mistletoe native to Australia.
There are 17 different types of native Mistletoe found in the arid zone of the Northern Territory, with 11 species occurring in the Alice Springs municipality. Interestingly, in Britain and Europe where Mistletoe has been embraced as an important mythological plant, there is only one species.

Mistletoe species occurring in the Alice Springs municipality:

Scientific Name	Common Name
Amyema bifurcata var. bifurcata	Twin-fork Mistletoe
Amyema gibberula var gibberula	n/a
Amyema hilliana	Ironwood Mistletoe
Amyema maidenii ssp maidenii	Pale-leaf Mistletoe
Amyema miquelii	Box Mistletoe
Amyema preissii	Wire-leaf Mistletoe
Lysiana exocarpi ssp exocarpi	Harlequin Mistletoe
Lysiana murrayi	Mulga Mistletoe
Lysiana spathulata	Flat-leaved Mistletoe
Lysiana subfalcata	n/a

Amyema quandang Grey Mistletoe also occurs within the MacDonnell Ranges Bioregion.

Friend or Foe?

Many scientists see Mistletoe as important to the health of an ecosystem as it provides food and shelter to animals, particularly in dry times when

Amyema maidenii in *Acacia aneura*
Photograph By R. Grund

other resources are rare. Some people see Mistletoe as a threat to the trees on their property and often try to remove it by cutting off affected branches. Trees which are infested with masses of Mistletoe plants are often old and stressed individuals. Cutting and lopping of branches on old trees can cause greater stresses to the tree than the original Mistletoe! Mistletoe is rarely responsible for the death of a tree but is usually an indicator of an unbalanced ecosystem with changed hydrology, fire regime, invasive species or old age. Mistletoe leaves were an important food for the locally extinct Brushtail Possum, and are often browsed by cattle and Camels.

There is not a lot of practical information available about what to do if your favourite tree is slowly becoming infested with Mistletoe. Lopping branches and herbicide application may cause more harm than good, so perhaps the best approach would be to try and improve the overall health and vigour of the tree and take the philosophical point of view, enjoy looking at the birds and Mistletoe flowers, and try to steal the occasional kiss.

Mistletoe Seeds

Mistletoe seeds are described by seed biologists as 'recalcitrant'. Unlike many other native plant species whose 'orthodox' seeds persist for years in the soil seedbank, recalcitrant seeds cannot survive drying, and so the Mistletoe seeds must germinate and establish within weeks or die!
The germinating Mistletoe seeds secrete enzymes that produce holes in the bark of branches. The seed then sends a modified root into this hole which eventually forms a knobbly 'haustorium' (where the mistletoe root and the tree are joined). Once the Mistletoe has established, it draws up water and minerals from its host tree that would otherwise have fed that branch. Mistletoes also supplement these with sugars produced by their own leaf photosynthesis. Established Mistletoe tends to grow quickly unless it is killed by fire or eaten by predators.
Mistletoe may be propagated by removing the skin of the fruit and placing the seed on the branch of a host

plant. Some Mistletoe species are very fussy about the correct species of host whereas others are less so.

Identifying Mistletoe

The Flora of Central Australia has a reliable key to identify Mistletoe species; however, the genus *Lysiana* can be difficult as some species have features which require a trained eye to distinguish.
If you are keen to impress your friends there is a simple method to determine the genus of local Mistletoe. The *Amyema* have petals which are divided all the way to the base. Mistletoe in the genus *Lysiana*, have petals which are not divided to the base but fuse a short way down to form a floral tube.

Amyema preissii
Photograph By R. Grund

Want to Know More....?

Alice Springs Desert Park's "The Mistletoe Story" is part of regular Guide presentation, with information on the biology of Mistletoe and its uses by Arrente people.
Also websites http://www.anzwers.com.au/ (the Australia NZ search engine) look up "mistletoe Australia", especially the local study by Nick Reid and Mark Stafford Smith on mistletoe in *Acacia victorii*.

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Albrecht, D., and Pitts, B. (2004) *The Vegetation and Plant Species of the Allice Springs Municipality, Northern Territory*. Greening Australia and the Department of Infrastructure, Planning and Environment, Alice Springs.

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Jessop, J. (ed) (1981) *Flora of Central Australia.* Reed Books PTY LTD.

Junior Ranger

I would like to introduce myself, I am Michael Barritt and have worked with Parks and Wildlife for the past 20 years. As the Community Education Ranger one of my jobs is conducting the Junior Ranger program from Alice Springs. The Junior Ranger program is an environmental education program for kids between the ages of 8 to 14 run by the NT Parks and Wildlife, Dept of Natural Resources, Environment and the Arts. It's a whole lot more than your simple environmental education program, its loads of great fun!

The program runs from May to November each year in Alice Springs, Tennant Creek, Katherine and Darwin. The Alice Springs program is also conducted through the School of the Air, involving kids scattered in the remote areas of Central Australia. The Alice Springs Junior Ranger program incorporates about 35 different activities on a wide range of topics from bird watching, fauna surveys, plant collecting and identification, local history, bush cooking, frog hunts, marsupial night stalks and many more. The activities always have a heavy local Centralian focus, allowing the kids to get a deeper appreciation of the local environment and some of the environmental stories that may not be widely known.

Alice Springs Junior Rangers discover some of the secrets of our local flora at the Alice Springs Telegraph Station

You are welcome to register your child now for the Nov-Dec program, which is packed full of great activities, (feel free to let others know of the program if you don't have kids in the right age group). Please contact Michael Barritt on 89518247 or at michael.barritt@nt.gov.au for a registration form or to talk further about the program. Each month a Coming Events brochure is sent out to members and they book into the activities they are interested in attending. Most of the activities are conducted on weekends and a few weeknights – usually the whole

family is welcome to attend as well. As part of my position I also do environmental talks for local schools, once again, on a wide range of topics. Please don't hesitate to contact me if you wish to organise a school talk or register your child for Junior Rangers for Nov – Dec and get in early for the Jan 2008 program registration.

Problems with pests?

Peter Elsworth, a PhD student from Robert Wicks Pest Animal Research Centre in Queensland, visited Alice Springs in October. Peter trapped 10 rabbits from 2 Land for Wildlife properties for resistance research into Rabbit Haemorrhagic Disease in wild rabbits.
The rabbits caught will be bred for resistance trials along with other wild rabbits caught from varying parts of Australia.
Peter has provided the following description of his project.

Development of genetic resistance to Rabbit Haemorrhagic Disease in wild rabbits *Oryctolagus cuniculus*.

Background:

Following the introduction of myxoma virus (MV) into Australia in 1950, it took only two to three years before rabbits began to show resistance to the disease as indicated by lower case mortality rates and longer survival times.

It is now more than 10 years since the introduction of Rabbit Haemorrhagic Disease (RHD) commonly known as the Calici virus into Australia and it would be useful to know whether rabbits were similarly developing genetic resistance to this second pathogen. Similarly it would be valuable to know whether Rabbit Haemorrhagic Disease Virus (RHDV) has altered from the original release strain in co-evolution with resistance shown by rabbits.

Main Questions

A: Have Rabbits Developed Genetic Resistance to RHDV

To answer this question a protocol will need to be developed for testing wild rabbits for evidence of genetic resistance. This should take into account an appropriate dose and route of challenge approximating likely infectious doses in the field. A selected test dose should be capable of infecting most experimental rabbits without being unrealistically high. To this end, baseline information would need to be established using known unselected rabbits. Domestic rabbits as experimental controls are likely to be the only option. This raises questions associated with making direct comparisons between wild and domestic rabbits which will need to be explored.

The protocol for testing wild rabbits to detect evidence of genetic resistance will form the basis of the experimental methodology. Evidence of genetic resistance would be based on lower mortality rates or prolonged survival times between the populations of rabbits. There may be other symptoms or modes of action that will indicate a level of genetic resistance and so tissue sampling and organ condition scores will occur for analysis to explore this.

Habitat and environmental conditions may be important factors in the development or lack of development of resistance. If there is no evidence of resistance, then the questions raised would be why has it not? What factors have slowed or prevented resistance from developing? Is there another biological cost to being resistant to RHDV? Comparisons will also be made to evolution of genetic resistance to myxomatosis in rabbits. Are there differences in the rate of evolution of genetic resistance for both diseases? Why might this be so?

B: Is RHDV Changing in Co-Evolution with the Rabbits

Having determined whether or not genetic resistance has developed in wild rabbit populations, the competing factor is whether or not RHDV is evolving to combat or prevent the resistance. The first stage would be to determine if there are different strains of RHDV in the field. Virus sequencing from the populations used in genetic resistance testing would show whether or not the virus has changed from the original release strain. If there are differences, then it would be useful to know if different strains show different levels of virulence or mode of action. Rabbits that are negative to the RHDV of greater than 12 weeks of age from one population would be challenged with different strains of the virus.

If there are differences in the virulence of strains of RHDV then this may answer questions raised in part about why resistance has/has not developed. Questions will also be raised about how this affects the effectiveness of RHDV in Australia. Will a less virulent form reduce the capacity of RHDV to be relied on as a control tool?

RHD has been an excellent control tool for reducing the negative impacts that rabbits have on the Australian landscape and agriculture industries. The implications of the results for rabbit control and the future use of RHD in Australia will be explored. What do the findings from this work mean in terms of the future of RHD as a biological control agent? Is the usefulness of RHD limited or can it be exploited further.

Control your Rabbit damage!
Many rural landholders are complaining about rabbit damage to their plantings. This will likely decrease following the recent rains, but the rain will also result in rabbit breeding and more rabbits! The following photo shows an effective cage to protect plantings.

Notice the leaf litter (dead Buffel grass) that has been placed around the edge of the cages as mulch, which assists with retaining moisture and stabilises the surrounding soils.

If you find a rabbit hole that has been recently cleaned out, give us a call and we'll arrange to look at it to determine if it is appropriate for fumigation. This should be done within a month of finding the cleaned out hole. The advice in the June 2006 Newsletter about removing piles of debris and closing off access to hiding places under sheds or containers continues to be important.

Bush Detective

Cryptogams (soil crusts) What are they?

Cryptogams are a specialised and diverse group that include organisms as varied as single celled algae through to very large and complex colonies of lichens and fungi that may stretch over metres or even hectares. Cryptogams are the nonvascular plants that reproduce through the production of spores rather than seeds (Scott *et al*. 1987). Cryptogams make up the vast majority of non-vascular plants. Cryptogams include algae, lichens, bryophytes and fungi (Scott *et al*. 1987). In the strictest sense fungi, some algae and lichens are neither plants nor animals but rather are classified into several separate kingdoms.

Cryptogams and their ecological significance

Cryptogams are one of the most poorly known and studied groups of all organisms (Scott *et al*. 1987). This lack of knowledge is not surprising given that many cryptogams are microscopic, have cryptic life cycles and specialist skills are required to identify and study individual species (Scott *et al*.1987). They are also extremely diverse, with estimates putting the number of fungi species alone at 1.5 million worldwide (Dalphe 1997).
Cryptogams, along with other microbial organisms, form the underlying ecological 'fabric' on which the patterns of more visible components of ecosystems are arranged.
The role of cryptogams in the healthy functioning of ecosystems is fundamental to the supply of ecosystem services on which all of society depends (Scott *et al*. 1987). In other words if your property has soil crusting, then your soils are in a healthy state.
They play central roles in the formation and stabilizations of soils, the decomposition of dead organic material and nutrient cycling. They form symbiotic relationships with most vascular plants and are an important food source for many other organisms. They also protect seeds in the soil from small falls of rain and non-viable germination. Only significant falls of rain will penetrate the surface crusting to reach seeds and result in germination with adequate soil moisture to give the seedling a chance to grow.

Soil formation

Cryptogams, particularly lichens and fungi play a fundamental role in soil formation (Scott *et al*. 1987, Anon. 1999, Dalphe 1997, Tommerup and Bougher 1999).
Lichens are pioneer colonizers of bare rock and through chemical processes break down rock material into mineral components and soluble elements, making these available to the ecosystem.

Soil stabilization

Lichen and mosses colonize bare soil, forming a visible surface crust. Under this visible surface crust, lichen and moss possess fine-root like structures (rhizines and rhizoids) that bind soil particles (Anon 1999, Tommerup and Bougher 1999). Although often less visible, fungi and algae are also present in these surface crusts (Anon. 1999).
Together this network of cryptogam cover traps nutrients and organic material, assisting the build up of a humus layer (Anon. 1999). Fungi in this layer break down dead plant material and recycle nutrients, making them available for higher plants (Warcup 1986).
The soil crust also provides a protective layer that slows moisture loss, while the physical structure and nutrients available in the crust creates suitable conditions for the germination and growth of higher

plant seedlings (Anon. 1999). Research suggests that the presence of a soil crust increases the availability of key nutrients such as nitrogen, phosphorous, potassium, calcium and iron to plants compared to sites with bare soil (Dumaresq and Greene 2001). The micro-topography created by cryptogam crusts increases surface roughness, reducing wind and water erosion and provides microhabitats for invertebrates. This process provides the crucial first steps in the re-establishment of vegetation communities on disturbed sites.

The crust provides physical protection to the soil surface from rain splash erosion – an important initial step in the erosion of bare soils (Anon. 1999). The cryptogam crust also slows the flow of surface water and may increase infiltration rates and filter surface flows by trapping sediment and organic material (Anon 1999). This limits the amount of sediment and nutrients flowing off site and into waterways.

In drier vegetation types, lichens and mosses may provide an almost continual crust layer in the inter tussocks spaces between perennial plants. In undisturbed locations these crusts may be decades or even centuries old (Jefferies and Klopatek 1987, Anon. 1999).

References

Anon. (1999) An introduction to biological soil crusts. http://www.soilcrust.org/crstbody.htm

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Dumaresq D. & Greene R. (2001) Soil structure, fungi, fauna and phosphorus in cropping systems. Rural Industries Research and Development Corporation.

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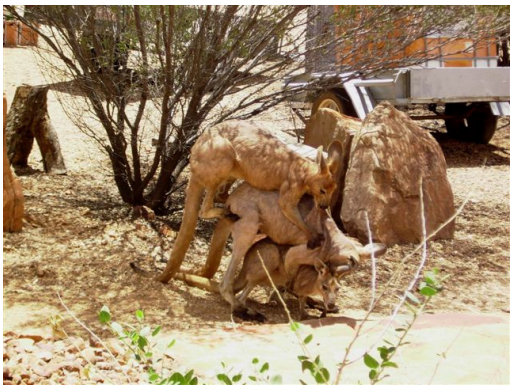
Tommerup, I.C. and Bougher, N.L.(1999) *The role of ectomycorrhizal fungi in nutrient cycling in temperate Australian woodlands.* pp. 190-224. *in* Temperate woodlands in Australia: Biology, conservation, management and restoration. ed. R.J. Hobbs and C.j. Yates. Surrey Beatty and Sons, Chipping Norton.

Warcup J.H. (1986) The Fungi. In *The Ecology of the Forests and Woodlands of South Australia* (eds H.R. Wallace), pp. 126-36.

Denise and Geoff Purdie never imagine that they would see 3 Euro's getting up to such mischief one afternoon on their property at Ilparpa.



You have got to feel sorry for the female on the bottom. Reproductive behaviour in certain Euro's has gone slightly overboard!

WILDCARE Inc. Alice Springs

Wildcare is committed to the rescue, rehabilitation and release of orphaned, injured and ill native wildlife. Manned completely by dedicated volunteers, Wildcare is non-profit and relies on support from the Northern Territory Parks & Wildlife Service, local businesses and interested members of the public who care about Australia's unique and diverse wildlife.

We need your support!

Wildcare costs just $20 to join, and all money raised will go directly to the care of local native wildlife. Membership provides the opportunity to learn about native animals through training courses, help out by manning the wildlife rescue phone, be involved in fundraising activities, membership drives, or even become a wildlife carer!

To join call Wildcare Alice Springs
Phone 0419 221128
or write to: wildcareasp@octa4.net.au
PO Box 4251 Alice Springs NT 0871

Letters to the Editor

Dear Editor,
I've got rabbits on my block in Buck Road, they are under a container, I've had a battle with them. Underneath the container is stuffed with heaps of newspaper and then covered with dirt. The rabbits have to dig out and when I last looked there was only one entrance.
I would love to have them removed. I am growing quondongs on my block & they have been a problem. They don't worry my mature trees but they are very destructive on the young plants.
I have various wire & brush barriers that are effective to varying degrees. I have put some fencing up, but unfortunately all I did was fence them in!!
Please advise me what I can do
Thanks
Ushma Scales

Hi Ushma,
The visiting rabbit trapper who wanted live rabbits for virus resistance trials has come and gone and we're again looking into baiting and trapping techniques appropriate to rural residential areas.
Fumigation would not have been an option under your container in any case.
The immediate solution to your problem would be to individually fence your quondongs with guard wire and to block the holes under the container with wire or timber rather than paper. If you can narrow the entry holes down to one or two, we can bring over a rabbit cage trap and try to catch them. A bit of pre-baiting with chopped carrot for a couple of days seemed to work for the visiting rabbit trappers to precondition the rabbits to having to go into the traps to get the bait.
This rain will make it more difficult to entice rabbits to carrot bait but the resulting green pick will also relieve the pressure on your quondongs. Unfortunately, the green pick will also stimulate breeding in the rabbits and there could be additional rabbit kittens running around in just over two months if we don't control them first. Let us know how you get on with blocking up the container entries so we can bring a trap or two over.
Cheers,
Bill

Dear Editor,
Would you be able to identify this plant which we have noticed growing on our land?
Bryan Clark.

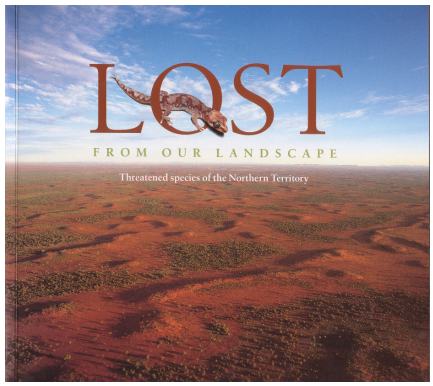
Photo By
Brian Clark

Hello Bryan,
The plant in you photo is a Deadly Night Shade Solanum nigrum which lives and grows in moist disturbed areas and is an introduced weed. Other common names can be interchangeable from either Black Nightshade to Deadly Nightshade to Black Berry Nightshade etc.
The berries and leaves on the deadly night shade are toxic and will harm your horse if it eats enough of them. Best to remove all plants.
Cheers Heidi and Bill

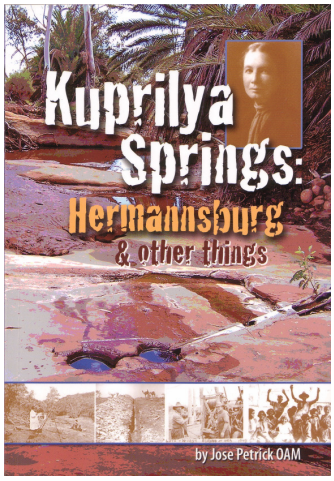
Books worth a Look

Lost from our Landscape

The Northern Territory is a special place, a natural and beautiful land. Its plants and animals are an important part of its character and the untamed nature of the Territory offers one of the world's great opportunities for wildlife conservation. But not all is as it seems. Many of the plants and animals that were once a feature of the landscape have become extinct. Many others are heading that way. This book helps us understand the cause of these disappearances, the steps being taken to conserve these species and, most of all, offers us hope to protect our wonderful natural heritage.



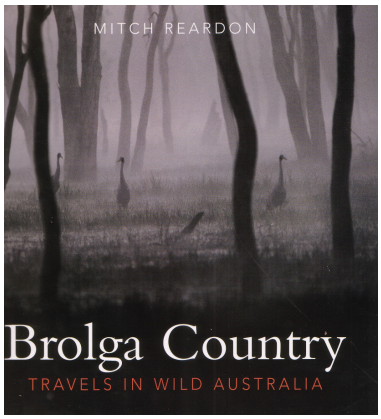
Kuprilya Springs by Jose Petrick.



This book provides a good read about building the historic water supply to Hermannsburg during the long drought of the 1930s. "Kuprilya Springs is a wonderful, beautiful place" Glen Auricht's memoirs. The book is available from Jose at email <jpetrick@westnet.com .au>

Brolga County – Travels in wild Australia

On an assignment in outback Australia, wildlife photographer and writer Mitch Reardon encounters a rancher whose infectious desire to protect the habitat of Australia's only native crane, the Brolga, inspires him to go on a journey to find these magnificent birds.



Brolga Country record's Reardon's progress through some of Australia's wildest and most remote country, from the wilderness of Cape York Peninsula to Bool Lagoon in South Australia.

Available at Dymocks Book Store.

Greening Australia's book *Native Plants for Central Australian Gardens*

This is a great reference book, its clear and concise and provides valuable tips for creating and maintaining a garden in our local environment. The book profiles approximately 50 native plants in detail, with information on trees, tall shrubs, shrubs, groundcovers and grasses. Information on habitat, salt and frost tolerance, lifespan, growth speed, specific uses and flowering is presented in an easy to follow table.

The book is available by mail through Greening Australia, contact number: 8953-2882. Geoff Miers Garden Solutions and Red Kangaroo Books.

Calender of Events

Alice Springs Field Naturalists Club

Saturday 24th November- Moonlight cycle to picnic spur, leaving from Flyn's grave, sunset/moonrise start.

Sunday 2nd December- Sewage ponds, meeting at gate at 7am, Contact Liz Carpenter 8953 6750.

Sunday 9th December – Simpson's Gap, Christmas breakfast breakup 8am.
Contact Bob Reid for further information about joining the Field Naturalist Club on 8952 1935.

Sustaining your Ears

This Wednesday evening between 7-8 pm will be the premier of the 8CCC programme **'Sustenance'** hosted by staff and volunteers from **ALEC.** This exciting new radio show will be covering a wide range of issues including sustainability and our local environment, local, national and international issues, interviews, music as well as occasional feature broadcasts of international environmental radio programmes such as Melbourne based Earth Matters.
When: 7-8pm Wednesday evenings
Where: 8CCC Radio Station, 102.1 FM.