

The 2010 Bourke Australian Rangeland Society Conference: a landholder's perspective

By Gus Whyte
Wyndham Station, Wentworth¹

The trip to the Conference started at about 8 am on Sunday, 26 September, as it is about an 8-hour drive to Bourke. Lesley [Lesley Palmer, General Manager of the Lower Murray Darling CMA] picked up Kevin Ingram and myself at Wyndham and we set sail. We travelled along the Darling River, through some country that looked fantastic (great wildflowers) after the rains, and it was also good to see the river with a lot of water in it. We arrived at Bourke to register a bit after 4 pm. Next we went out to the Kidman Camp, which was the site of the 'tented camp', home for the next five nights. About 70 other people were at the tented camp, so you can imagine the amount of 'timber being cut' (snoring) most nights!

Below: Gus Whyte at home on Wyndham Station



¹ Please note that these comments by Gus Whyte are made independently of the Lower Murray Darling Catchment Management Authority.

That evening we were back at the 'Old Lands Office' for some drinks and nibbles and a very nice welcome to Bourke by the Bourke Shire Council. We were welcomed to the Conference and the wonderful town of Bourke by the Mayor Andrew Lewis and the General Manager Geoff Wise. It was great to see Geoff and his wife Ann, as they are extremely passionate about the area, and throughout the next few days they were involved in most things that we did.

Monday. The official program began early with the mandatory breakfast at Grubby Micks (a café at the Back O'Bourke Centre), then on to the tours for the day. I opted to go to 'Toorale' and see for myself what all the fuss was about. We had a great drive out to the first dam on the Warrego River (Boera). This dam pushes water out on to the Western floodplain, and here we discussed river management and possible future plans. The National Parks have no immediate plans to change anything, as they need to gather a lot more information so they can gauge the impacts of any decisions, so for now the four dams will remain in the Warrego. After the dam we travelled down to the Irrigation Centre. It soon became very obvious why 'Toorale' was so sought after as a National Park, as the country went from thick woody weeds to beautiful open plains as soon as we crossed the boundary into the property. This plain could be the most fantastic grass plain around, so it will be very interesting to see what happens with just total rest for eternity. In the afternoon we visited the final dam on the Warrego before it enters the Darling, and here the bus boiled on us so we had a wait while the driver fixed it and got us back on the road.

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My thoughts after the tour was it does appear that there has been a benefit of the Commonwealth owning the water (a lot more water is in the Darling below the junction), but it did seem the NPWS are most uncomfortable managing the land and other options may occur here. When we arrived back at Bourke we had five minutes for a tub and then into the old wharf for a wonderful welcome BBQ dinner under the stars.

Tuesday. This was the first day of presentations, and we started with a 'Welcome to Country' by local Phil Sullivan. This was a very moving talk and really set the Conference off to a great start. After the opening, Guy Fitzhardinge spoke about including the people when we aim to conserve the environment and the wilderness areas. Next followed nine very enthusiastic and passionate land managers discussing their experiences and the actions they had taken to conserve/regenerate their landscape. The interesting thing was that all but a couple relied on machinery to improve the land, so I guess they just love paying the price of fuel to the fuel companies. After lunch we had some Aboriginal land management presentations, and I hope everyone went away from the session thinking that we could learn a lot from Aboriginal people by including the land in all our decision making. Tuesday night was free, and we had a great BBQ and poetry night at the Kidman camp, with all money raised going to the local RFDS and the NSW Ambulance Service.

Wednesday. We started with presentations on the issues of the Murray Darling Basin. The points I took away from this session were that we shouldn't separate the water

from the land and that we need to respect local communities and allow them to decide funding priorities. Following morning tea, Greg Brennan from WA spoke about the Southern Rangeland area (same size as NSW). He may as well have been talking about the Western Division, saying that there was no carbohydrate (obtained from grasses) in the system and there was a huge influx of protein (provided by bushes), with goats and kangaroos also being a big problem.

Another presentation covered the issue of the effects of coal seam gas on the Great Artesian Basin. About 180 to 350 GL of water is removed from the Basin each year and can be sold to irrigators. The afternoon session included some wonderful presentations by young scientists, PhD students etc. These students were very passionate about their study, but as they were not closely connected to landholders I'm not sure if the information presented could be implemented on farm. That night we were back at the Back O'Bourke centre for a great outside dinner and entertainment that kept us all amused, even though it was very cold. (Yes, it can be cold in Bourke!) Grubby Mick's was set up to look like the PS Gemini that travelled up to Bourke about 150 years ago, and as Geoff Wise read a part of riverboat captain Randall's diary you could picture the scenes of those times.

Thursday. This was the last day of the Conference, and it had some of the best messages, including that conservation can exist with production. Sheldon Attwood covered this topic, and he did a fantastic job not just in content but also in delivery, speaking about resilience and tipping points. There was a presentation from a South Australian perspective on goats, and there was no silver bullet here, just hard work. These people have spent some time working one-on-one with landholders keen to do something and then show the benefits to others. Alan Lauder spoke after lunch about his carbon story, which is pertinent to this region. Sheldon Attwood spoke again about monitoring outcomes. Ron Hacker and Joel Brown summed up the Conference, giving a very good appraisal from a scientific perspective and a glowing rap to the presenters, especially the landholders and the Aboriginal participants. There was also a short presentation by the WA Committee regarding the next Conference in Kunanurra in 2012, and also one from the organizers of the next world Rangeland Congress in Rosario, Argentina, next year.

Below: Russell Grant, Rachel Melrose and Kevin Mitchell at the Rangelands Conference
Photo: Andrew Hull



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LICE & FLIES WORKSHOPS

**Tuesday
December 7
Hatfield Hall**

**Wednesday
December 8
Booligal Hall**

(Replacing the Kitcho workshop, which has been postponed twice by rain!)

- Learn how to pick the sheep flies love
- Learn which chemicals work for lice and flies
- Prepare your management and breeding plan to prevent lice and flies



Lice!



Flies!

Guest Speakers:

Representatives from the various animal health companies

The workshops are free but you must RSVP

The workshop will start at 9.00 am and conclude at 4.30 pm

Book your spot by Friday, December 3!

ph: Sally Ware, I&I NSW, Hay 0429 307 627 or 02 6993 1608
sally.ware@industry.nsw.gov.au



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Making More From Sheep

Right: Graham Finlayson in a paddock on his property 'Bokhara Plains' near Brewarrina. Bokhara Plains was a venue for one of the Conference field tours.
Photo: Sally Ware



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Important points

This is what I reckon I got out of the Conference

- We (landholders) should throw the word 'sustainable' away, as this implies that landholders are just degrading the country at a slower rate. Conservation areas can be 'sustainable', whereas landholders have the ability to be 'regenerative'.
- Land management should be outcome focused, not process focused. Conservation areas = total rest. This is a process or tool, not an outcome.
- We should promote the low-technology approach to landscape management, i.e. better stock handling, use of mobs, use of grazing, use of rest. Not just the practice of burning diesel.
- There should have been much more question time, as there was very little interaction between the crowd and the presenters.
- These conferences are a great opportunity to meet other passionate

'Rangelandites'—not just Australians but from around the world—and should be encouraged and fully supported.

- Some of the experiments and projects that were set up were done so in a way that showed disregard for the landholders' skills, in that the grazing trials were managed very badly and just poorly set up. If you are going to do a trial looking at rotational grazing versus set stocking (for example), then you need to have the right management systems in place. A rotational grazing system requires much more management than a set stocking system, and I'm not sure that the researchers doing the project had the right systems in place.
- Although a lot of people enjoyed the trip out to 'Bokhara Plains' (Graham and Kathy Finlayson), there was a lot of comment, such as 'This won't work in my country' and plenty of 'How lucky Graham and Kathy are!' There was not enough celebration of the hard work and the skills that had been used to create this landscape. It can be enormously empowering to know that everyone has the capacity, through the use of animals, to create the landscape they want.

In closing, I would like to congratulate the staff of the Western CMA on the fantastic job they did in hosting the Conference. I'd especially like to mention Andrew Hull, who was an excellent MC. Andrew is a very talented person, and he used his skills in poetry, singing and storytelling to keep us very amused and entertained for the few days. I would also like to thank the Lower Murray Darling CMA (in particular, Lesley Palmer) for giving me a lift up and back to Bourke, and for their generous contribution towards my costs that made the trip possible.

Right: Courtney Milne and Jemma Odewahn (Western CMA) and John Thatcher (Bourke Landholder) during a break in the Conference
Photo: Andrew Hull



Aboriginal communities produce DVD

A DVD documenting the ways in which the Aboriginal people of Lightning Ridge, Walgett and Brewarrina traditionally cared for the environment has been produced.

The *Through our Eyes* DVD features Aboriginal elders and knowledge-holders from the Ngemba, Kamilaroi and Euahlayi groups describing the land management practices and social, spiritual and cultural knowledge that enabled their people to care for the country for tens of thousands of years.

The official launch of the DVD was held in Lightning Ridge on 12 October, with screening nights held on the following two nights in Walgett and Brewarrina.

The people featured on the DVD are June and Roy Barker, Brenda McBride, Ted Fields, Elizabeth Wallace and Ben Flick from Lightning Ridge; Paul Gordon, Brad Steadman, Diane Kelly, Lionel (Charlie) Williams and children from Brewarrina; and students from St Joseph's Catholic School Walgett and Walgett Community College Primary School.

The DVD is made up of 19 short documentaries, which will also be accessible via the internet. The documentaries include creation stories of sites including Yambacoon Mountain near Brewarrina and the Little Thigabillas and Mt Oxley, uses of native plants, principles for ensuring healthy water sources and animal populations, using constellations to find food, and recollections of the river (including the iconic Brewarrina fish traps) from the past to the current day. The children sing in language and perform and explain a Welcome to Country ceremony. Copies of the DVD will be available for people who attend the screenings.

The DVD was commissioned by the Western CMA on behalf of the Western Catchment Aboriginal Reference Advisory Group and will be useful for both non-Aboriginal and Aboriginal people.

Our elders and knowledge-holders have a huge amount of information that we want to share with our children and people in the wider community.

You need to know your past to know where you are going. Having strong cultural values and a sense of identity is important for Aboriginal people, and this is just one way that we can pass on that information and help our young people to be proud of who they are.

Chair of the Western CMA Board, Rory Treweeke, says it is important to record Aboriginal land management practices that have, in many cases, been ignored by European settlers.

'We need to manage this country better and we can learn from the way it was done by the original inhabitants,' he said.

'Not only are we recording the history and the reasons why things have happened in the past, but we are passing on that knowledge to future generations so that they don't make the same mistakes.'

The DVD is part of a larger project to document Aboriginal land management practices and cultural knowledge and to make it accessible for current and future generations. The *Through our Eyes* DVD is jointly funded by the NSW and Australian governments. If you would like a copy of the DVD mailed to you, please contact the Western CMA on 1800 032 101.

By Blackie Gordon
Aboriginal Communities
Catchment Officer
Western CMA



Left: Children of St Joseph's Catholic School, Walgett, perform a Welcome to Country ceremony on the *Through our Eyes* DVD. Photo: Craig Bender

Big crops – big stubbles: What's the value?

By Barry Haskins
District Agonomist
Industry & Investment NSW
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The value of retained cereal stubble following harvest has been well noted in previous years, with many growers unable to grow enough stubble because of drought conditions. The noted benefits of standing cereal stubble include increased water infiltration, lower evaporation, decreased soil erosion, and increased organic matter. All this leads to better plant growth and soil health.

The typical higher-yielding header trails where extra stubble has been concentrated following the header have remained a familiar sight throughout the run of drier years, but amazingly, even in this fantastic season, the extra organic matter in the header trails has again allowed for better crop growth and soil health. In many cases these header trails are from 2003 and beyond, and they yield up to three times the paddock average! It seems blatantly obvious to any observant farmer how important stubble is to the farming system, so now we've got it we must look after it!

As we progress through a fairly decent season, it seems extremely likely that we will produce a lot of stubble from this season's crops. Obviously the benefits of stubble are well noted, but very rarely understood and measured.

On average, many of the crops in the region this year will produce around 5 t/ha of stubble above the ground and about 1 t/ha of root matter below the ground. This equates to about 2 t/ha of carbon that will be produced 'free of charge' per hectare. In this 2 t of carbon will be roughly 20 kg of nitrogen, 5 kg of phosphorus, 30 kg of potassium and 7.5 kg of sulfur. If you had to pay

for these nutrients through inorganic fertilisers you could expect to be up for around \$60 to \$80/ha, but obviously this does not include the other added benefits of stubble mentioned previously, which can outweigh this cost benefit many times over through increased soil health.

The issue facing farmers is how to manage this amount of stubble load so that it doesn't impede next year's sowing operation.

For farmers with seeding equipment like disc seeders or tines that handle large stubbles this will be quite easy, and the stubble will be left standing and intact. However, many farmers are not equipped to handle the levels of stubble that we will experience, and they may have to manage the stubble a little differently.

The options available to farmers to manage stubble begin at harvest. Harvesting at lower heights and ensuring straw spreaders are used to spread evenly is a must. Many farmers may even harvest high, then return once the grain is in the silo and cut it again a little lower. This makes managing the stubble with seeders much more practical.

Some farmers may also opt to leave the stubble at harvest, and then mulch it closer to sowing. This breaks the stubble down, but it can still be hard to get through with some seeders.

Another option, albeit less desirable, is to incorporate the stubble with tillage. This needs to occur as close to harvest as possible so that the stubble has a chance to break down before sowing. Leaving this incorporation for too long causes nutrient tie-ups and trash flow problems. In many cases, if stubble is incorporated by cultivation, expect at least four cultivations in total to get the paddock into sowing order.

The last option is to burn the stubble. This practice, although common, is undesirable, as the value of most of the stubble is lost. The later into the season the burn, the better, as some carbon will have a chance to break down, but a lot of nutrient value is lost through burning. It is important to note, however, that burning does offer some advantages such as weed seed and leaf disease destruction, and it may be an option in troublesome paddocks.

Whatever you plan to do with your stubble, think it through before harvest and understand its value, as we may not have another chance to grow this much again for a long time!

Below: With this year's bumper season, think carefully about what you do with your stubble. *Photo: Barry Haskins*



'Talking Fish' in the Murray-Darling Basin

How long have you been fishing in the Murray-Darling Basin? Do you have recollections about the 'big ones' that 'used to be caught around here'? We are looking for people who have a current or past connection with the rivers and waterways of the Murray-Darling Basin. We want to hear people tell their stories and share their memories as part of our exciting new oral history project.

Many different groups of people, including anglers, Aboriginal communities, tourists and landholders, have developed unique relationships with rivers and their environments as they have lived by, grown up with, visited and played in them.

The long history of recreational fishing within the Basin has led generations of people to spend large amounts of time on or near its rivers and waterways. This desire to catch fish and to experience the river has given people a refined understanding of how fish relate to the riverine environment, and consequently how changes to these environments have affected the status of native fisheries.

In addition, Aboriginal communities have relationships with the rivers that stretch back thousands of years – well before the arrival of European settlers.

Accessing and recording the wealth of information from River users will make a significant contribution to our knowledge of the Murray-Darling Basin and will help shape the management decisions of the future to achieve improved river health outcomes.

The oral history project will focus on 12 reaches within the Basin, but we are very keen to hear from anyone who lives, or has lived, in the Basin, especially if they have an interesting story or photographs they would like to share.

Of the 12 reaches across the Basin, the team has so far visited the Paroo River and Upper Condamine River in Queensland, the Culgoa Balonne across the Queensland and NSW border, the Namoi River demonstration reach between Boggabri and Narrabri in NSW, the Upper Murrumbidgee in NSW and the ACT, the Goulburn River in Victoria, and Katarapko Creek in the Riverland of South Australia.

Over the next couple of weeks and into the new year the team will also be visiting the Great Darling Anabranch downstream of

Menindee Lakes in NSW, the Ovens River in Victoria, the mainstem Murray River between Corowa and Echuca (shared by NSW and Victoria), the Darling River between Bourke and Brewarrina, and finally the Coorong and Lower Lakes in South Australia.

Local radio features and an interactive website with downloadable material will be produced to encourage involvement and increase community participation in the project.

This project is being managed by Industry & Investment NSW's Conservation Action Unit in conjunction with all four Basin State fisheries agencies. It has funding from the Murray-Darling Basin Authority's Native Fish Strategy.

If you have a story or have photos you would like to share with the 'Talking Fish' project, or would like to know when visits are happening, please contact Scott Nichols on 02 8437 4909 or scott.nichols@industry.nsw.gov.au or Jodi Frawley (University of Technology, Sydney) on 0418 197 454 or jodi.frawley@uts.edu.au.

By Scott Nichols
Conservation Manager
Industry & Investment NSW
Wollstonecraft
Phone: (02) 8437 4909



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Below: Rodney Price with a beautiful Murray cod from the Macquarie River. *Photo by Grant Gunthorpe.*



Peter Clark Memorial Scholarship guidelines

Outline

The Peter Clark Memorial Scholarship is being funded by the **South West Land Management Group** and administered by RMAP (Rangeland Management Action Plan) Inc. Applicants for the scholarship must show that they have knowledge of the difficulties facing the Western Division.

Selection

One 2-year scholarship is awarded each year. Applicants must be students currently enrolled in Year 12 and intending to continue university studies in 2011 and 2012. The scholarship will commence in mid 2011.

The applicant must have immediate family that hold or manage a Western Lands lease.

Applicants must be committed to attending university, either in the Western Division or outside the region.

Value

The scholarship offers up to \$1,500 each year to the successful applicant for 2 years of the student's

studies. The aim of the scholarship is to promote further education by helping with the payment of educational expenses such as the purchase of books, university fees, board and lodging, or any other education-related expenses.

How to apply

- Complete and submit the attached application form.
- **Provide a 500-word written composition** on 'Your vision for the Western Division'. It may include social, environmental, economic and cultural elements.
- Attach a letter of support from your School Principal.
- Attach a copy of your school report for the Trial Higher School Certificate examination.

At the end of Year 12, the successful applicant must provide a copy of his or her Higher School Certificate to the Peter Clark Memorial Scholarship Committee for their records.

Closing date

1 February 2011 for study beginning in University term 1 or semester 1, 2011.

More information

Applications forms (see the following page) and further information regarding your eligibility can be obtained from the RMAP Inc. office, 29 Darling Street Wentworth NSW 2648, or by phoning 03 5027 2416.

Deadline for articles for the next Issue 136 of the Western Division Newsletter is Monday 14 February 2011. Please send articles to Sally Ware, I&I NSW, PO Box 393, Hay 2711, email to sally.ware@industry.nsw.gov.au or phone (02) 6993 1608.

Peter Clark Memorial Scholarship Application Form

Students wishing to apply for the scholarship need to complete the following application form. The form should be lodged with the Rangeland Management Action Plan, Peter Clark Memorial Scholarship, PO Box 305, Wentworth NSW 2648. All applications must be received by 1 February 2011.

Name: _____ Date of birth: _____

Home address: _____

Postal address (as above or different): _____

Telephone: _____ Fax: _____ E-mail: _____

High School attended for HSC: _____

University enrolled in (if known): _____

Name of course (if known): _____

Supporting Documents Required

- Written composition on 'Your vision for the Western Division'.
- Copy of trial Higher School Certificate results (or full HSC results when available)
- Copy of university course enrolment confirmation (when available)

Declaration

I declare that the information supplied by me on this form is complete and correct. I authorise the Peter Clark Memorial Scholarship Committee to obtain any further relevant information regarding details of my enrolments and examination results, including details of my enrolment variations and attendance. I grant the Peter Clark Memorial Scholarship Committee permission to use details of the scholarship, if awarded to me, for publicity purposes.

Signature: _____ Date: _____



2011 Peppin Shaw

20th Anniversary

**Hay Merino Breeders Incorporated
20th Annual Peppin-Shaw
Riverina Ewe Flock Competition**



Tues 8th February and Wed 9th February 2011

For the 20th year - It's on again,

Don't Miss Out!

For further details

contact Stacey Lugsdin, Secretary ph: 0428931931



Broken Hill residents get involved in conservation

By Nicky Cooper
Conservation Partnerships
Officer
NSW Department of
Environment, Climate
Change and Water
Broken Hill
Phone 0459 161 837



Local Broken Hill residents are taking steps to protect native plants, critical habitats and native animals on their properties for future generations. National parks and reserves aren't the only places you'll find important native plants, critical habitat and native wildlife. Many significant native species and natural and cultural heritage values also exist on private land.

The long-established Conservation Partners Program of the Department of Environment, Climate Change and Water (DECCW) provides for the establishment, ongoing monitoring and support of protected areas on private and other public lands of high conservation value through Wildlife Refuges and Conservation Agreements.

Increasingly, farmers and graziers throughout NSW are placing Conservation Agreement covenants over parts of their properties so they can be sure they are leaving the land better off as a legacy for future generations.

Local Broken Hill residents Steve Radford and Margaret McBride recently established a 7917-hectare Wildlife Refuge through the Conservation Partnerships Program on their property. The Wildlife Refuge will protect vegetation types, including gibber chenopod shrublands, stony desert mulga shrublands and inland floodplain woodlands.

Native wildlife listed as vulnerable under the *NSW Threatened Species Conservation Act 1995* has also been recorded on the property,

including the freckled duck (*Stictonetta naevosa*) and pink cockatoo or Major Mitchell cockatoo (*Cacatua leadbeateri*).

Managing your property under a Conservation Agreement or as a Wildlife Refuge is voluntary and just one way in which you can contribute to the conservation of our unique Australian natural and cultural heritage.

The two types of arrangements differ mainly in that Conservation Agreements are more permanent, run with the title of the land, and are recognised as part of the National Reserve System.

Currently an important project supported by the National Reserve System Program is being undertaken in Western NSW. This project is seeking private and other public landholders with an interest in conserving significant local wildlife, natural and cultural heritage on their land.

There is now local representation for the Conservation Partners Program in Broken Hill, working in partnership with the Western CMA. For further information, contact Nicky Cooper at Broken Hill on 0459 161 837 or Kate Nicolson from the Western CMA in Dubbo on (02) 6841 2754.

Further information about the Program can be accessed at:

<http://www.environment.nsw.gov.au/cpp/ConservationPartners.htm>.

Right: Margaret McBride and Steve Radford have recently established a 7917 hectare Wildlife Refuge through the Conservation Partnerships Program at White Leeds Station.



No-till cropping project at Balranald

A project that is helping to overcome barriers to the adoption of no-till cropping began in the Balranald District in 2009. Funded under the Federal Government's Caring for Our Country program, the project is being administered through the Homebush Landcare Group. Members of the Landcare group, including Marc and Tim O'Halloran, Balranald farmers Gavin Howely and Howard Hillerman, and agronomist Andrew Schipp, make up the management committee for the project.

The goal is to find ways to manage the narrow-leaved hopbush that has colonised many no-till fields in the area. It appears that removing cultivation from the system has given this perennial native shrub a competitive advantage because it is tolerant to conventional fallow herbicides. Reluctantly, farmers have had to use cultivation to remove it, setting back the progress they have made in improving soil health with no-till.

Field trials using a WEEDit® boom spray and various registered herbicides were undertaken in February this year. The WEEDit® sprayer uses special sensors that detect chlorophyll. These are connected to each spray nozzle to allow a measured dose of herbicide to be applied to individual weeds, rather than the usual approach of blanket-spraying a whole paddock. Typically this saves up to 90% of the herbicide, depending on how scattered the weeds are. Using this boom enables chemicals that are normally cost prohibitive to come into play, and the savings in spray volume per hectare open up the possibility of using expensive, specialised herbicide carriers such as distillate.

Results from the field trials this year confirmed the ability of the WEEDit® boom to selectively detect and spray hopbush seedlings, with the most promising treatments giving up to 90% control. These were applied with water as a carrier at 100 L/ha. Observations suggested that increasing water volumes to allow greater foliage coverage may improve this result.

Investigations into the seasonal timing of herbicide application and the fine-tuning of water rates, adjuvants and chemicals will continue into 2011 and will link in with proposed research by Mallee Sustainable Farming Inc. into the same issue. The field work conducted this year also highlighted the need to examine some of the problem perennial grass weeds, such as couch

and windmill grass, that are proving just as tough as hopbush to control. Methods to control these weeds will also be trialled in 2011.

Providing educational opportunities is another way the Homebush Landcare Group is promoting no-till adoption and invasive shrub management. Two no-till workshops and a plant ecology day have been factored into the project. The first workshop was held at Balranald in June; 25 farmers and Landcare members attended. Landcare members have also undertaken a plant identification day with Western NSW plant specialist Peter Milthorpe; the ecology and management of native species were discussed in depth.

If you would like more information about the no-till cropping project, contact Andrew Schipp on 0427 007 362.

By Andrew Schipp,
District Agronomist,
Industry & Investment
NSW, Hay
Phone (02) 6993 1608



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Left: Hopbush plants of this size are difficult to kill with conventional fallow herbicides. These plants were treated with a common knockdown herbicide 4 weeks ago and show little damage. *Photo: Andrew Schipp*



Left: A boom sprayer fitted with WEEDit® sensors being trialled near Balranald. *Photo: Andrew Schipp*



Left: When the WEEDit® sensor detects chlorophyll, a quick-acting solenoid releases a plant-sized dose of spray mixture. *Photo: Andrew Schipp*

Western CMA marks anniversary of Burke and Wills expedition

In recognition of the 150th anniversary of the Burke and Wills expedition from Melbourne to the Gulf of Carpentaria, the Western Catchment Management Authority (CMA) has produced a series of five fact sheets to reflect on changes within the Western Catchment over the past 150 years.

By Maree Barnes
PR and Media Officer
Western CMA, Dubbo



The fact sheets are available at:
www.western.cma.nsw.gov.au/Pages/BurkeandWills_Fact_Sheets.html

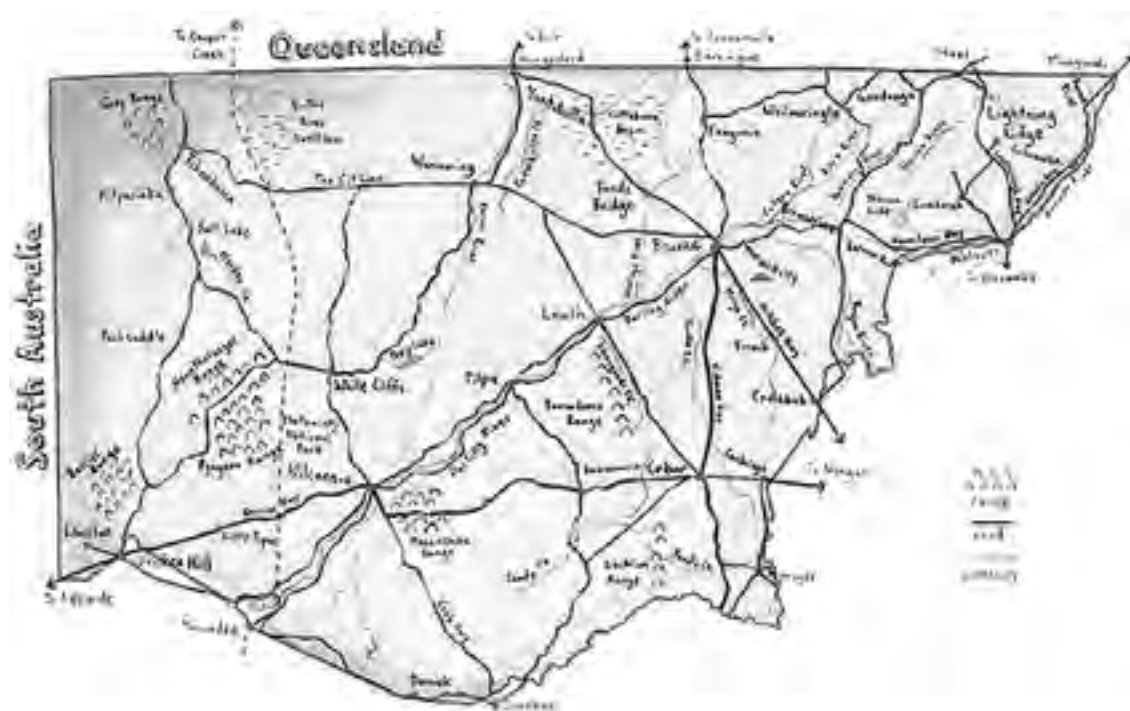
The anniversary provides the opportunity to compare the landscape as Burke and Wills saw it in 1860 with today's landscape and to identify ways in which current land managers and community members are dealing with issues such as the introduction of foreign plants and animals; changed river, soil and vegetation conditions; and recognition of the value of Aboriginal people's knowledge and skills in caring for the environment.

Although the records of the journey of Burke and Wills journey have proven to be incomplete and unreliable (with Burke criticised by a Victorian Royal Commission in 1861 for failing to keep a journal), the Western CMA has been able to trace the approximate path taken by the explorers through the Western Catchment 150 years ago.

We are using the anniversary to acknowledge the lessons that have been learned the hard way in the past 150 years and to highlight the ways in which today's land managers and community members are managing and protecting the natural resources of the area.

Following in the footsteps of Burke and Wills, pastoralists headed to the region with flocks of sheep in the early 1860s, in search of green pastures. Whereas the Aboriginal people had lived in harmony with the seasons for tens of thousands of years, the European settlers found it an unpredictable and unforgiving landscape.

Much has changed in the past 150 years. Across the nation, natural resource managers are now dealing with serious threats to biodiversity that range from loss and degradation of habitat to the spread of invasive species, changes to water flows and the impacts of past overgrazing, as well as the increasing issue of climate change.



Right: The approximate route taken through the Western Catchment



The landholders we work with today recognise that Western NSW offers a challenging and unpredictable environment that requires them to be pro-active, flexible and forward-thinking in their approach to life on the land.

Whereas Burke and Wills struggled to make their journey with camels, wagons and horses, today's land managers have new and frequently changing technology and equipment, as well as accessible roads and modern transport. They also have increasing access to communications and can benefit from weather forecasts that are based on historical records, allowing them to be more responsive to environmental changes.

Burke and Wills had very little interest in, or respect for, the Aboriginal people, and when European people moved into the Western Catchment from the 1860s they generally disregarded and disrupted the practices of Aboriginal people. Aboriginal people have a great deal to teach the wider community about caring for the environment, which they have done for tens of thousands of years, and that is only now being truly appreciated.

If Burke and Wills had taken the time to learn from the Aboriginal people they could have returned to Melbourne in triumph, rather than being defeated by the Australian Outback.

The expedition set out from Melbourne on 20 August 1860, with the aim of crossing the continent of Australia from south to north. Despite several attempts, no European person

had done this before, and to the Victorian colonists the centre of the continent was unknown, unmapped and unexplored.

With supplies to last 2 years, they were prepared for almost any eventuality, with everything from airbags to strap onto the heads of the camels so that they could swim through deep water, to a wagon that could be converted into a raft, a cedar-topped oak camp table, and pocket charcoal for every man to filter drinking water. The expedition had too many inappropriate supplies, including dandruff brushes and enema kits, yet they packed only two sets of field glasses and 12 water bottles. They were also unprepared for the sheer scale of the countryside.

The explorers reached Menindee in October 1860, having travelled 750 km in 56 days—a journey that usually took just 10 days by horseback. With Burke impatient to be the first to reach the north coast, he then went against his orders and split the expedition into two groups.

Burke and Wills took the advance party through the Western Catchment, stopping briefly for water at what is now Mutawintji National Park and later at a lookout at Nuntherungie Creek. A marker peg remains at Narriearra Station in the north of the Western Catchment, showing a stop just west of the Bulloo River Overflow and north-east of Tibooburra. The party then ventured over the Queensland Border towards Innamincka and

Above: The Burke and Wills Expedition travelled through the Joe's Hole Creek area, south-west of Mutawintji National Park.

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Right: The supply party spent 3 months on the banks of the Darling River north of Menindee.



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Cooper Creek. Meanwhile, the supply party remained at Menindee until January 1861.

When he reached Cooper Creek, Burke again split the group, choosing to make a dash for the coast with only three companions: Wills, Gray and King. Because of exceptional rains they encountered no water shortage, and in February 1861 they sighted the Gulf of Carpentaria.

Meanwhile, at the Coopers Creek depot, the men waited for 18 weeks. With supplies running low, and starting to feel the effects of scurvy, they started to believe that Burke would never return from the Gulf.

Marching 12 hours a day, Burke and his three companions covered the return journey of 1500 miles to Cooper's Creek in 4 months, but Gray died on the way.

On Sunday, 21 April 1861, the men left behind at Coopers Creek, led by Wright, departed for Menindee just 9 hours before Burke, Wills and King returned.

Burke, Wills and King dug up the provisions the supply party had buried for them under what is known as The Dig Tree with a letter explaining that they had given up waiting and had left only that morning. However, the three men and the two remaining camels were exhausted and had no hope of catching up to the supply party.

Instead of following them back to Menindee, Burke decided to follow the Cooper downstream to a cattle station near Mount Hopeless. In the coming months Burke and Wills died, whereas King survived with the help of the Yandruwandha people and was eventually taken back to Melbourne by a later rescue mission.

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The information contained in this publication is based on knowledge and understanding at the time of writing (November 2010). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the Department of Industry and Investment or the user's independent adviser.

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Deadline for articles for the next Issue 136 of the Western Division Newsletter is Monday 14 February 2011. Please send articles to Sally Ware, I&I NSW, PO Box 393, Hay 2711, email to sally.ware@industry.nsw.gov.au or phone (02) 6993 1608.

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