



DECEMBER 2017 | ISSUE 6

What's been happening in the Great Victoria Desert in 2017...

Hello and welcome to the 6th edition of the Great Victoria Desert Biodiversity Trust (GVDBT) Newsletter.

This year we've had a number of new projects start and others completed.

We've had three fire mapping and information gathering projects which you can read more about in this issue: 1) Cultural Burn Rule and Biodiversity Mapping, 2) Photo Imagery and Traditional Aboriginal Burning Patterns and 3) Fire Scar Mapping.

The Malleefowl site selection project was completed by Gaia Resources which included workshops with stakeholders (see Aug 2017 newsletter)

The Adaptive Management Implementation Plan was completed. Rangelands NRM will continue to facilitate catch up meetings with the Adaptive Management Partners (Spinifex Land Management, Yilka Aboriginal Corporation, Central Desert Native Title Services, Rangelands NRM, Greening Australia, the Trust, Conservation Management and the Department of Biodiversity, Conservation and Attractions) to develop and implement the projects recommended in the plan.



*Nganamara (Malleefowl) building a nesting mound.
Photograph taken by Paul Bulley and Spinifex Land Management.*

The Greening Australia Sandhill Dunnart Camera Trapping Project was launched in September. It was exciting to have this long awaited project underway. The Trust owns the camera's so we plan to make these available for future projects in the GVD.

It is hoped to start Malleefowl on-ground survey projects next year in conjunction with partners and landowners.

We hope you enjoy reading this edition of our newsletter. If you have any comments or questions on the articles or you would like further information about the Great Victoria Desert Biodiversity Trust, please contact the Operations Managers on operations.manager@gvdbiodiversitytrust.org.au.

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Sandhill Dunnart Camera Survey Underway in the GVD

A Greening Australia field team has recently returned from the incredibly vast and remote Great Victoria Desert (GVD) where they have been undertaking surveys to detect the threatened Sandhill Dunnart.



The Survey team traversing Stackman Track in October 2017



Unburnt Sand hills likely habitat for Sandhill Dunnarts

In Western Australia, there is little understanding about the ecology, biology and habitat requirements of the Sandhill Dunnart, and the influence of threatening processes on the species.

In 2015/2016, the GVDDBT commissioned the WA Department of Parks and Wildlife (now Department of Biodiversity, Conservation and Attractions, DBCA) to produce survey guidelines and a baseline survey plan to guide future survey efforts. Following on from this, the GVDDBT commissioned Greening Australia to lead a baseline survey for the species in late 2017. The survey is being led by Liam Mulcahy, who has a wealth of first-hand experience regarding the challenges presented by this beautiful and remote area, in collaboration with zoologist Jeff Turpin (Kingfisher Environmental), who has had significant experience with Sandhill Dunnart survey and research in the region. The field surveys have also benefited from assistance by dedicated volunteers Jo Riley, Joseph Meadham and Zac Simms.

The overarching objective of the project is to assess the occurrence and distribution of Sandhill Dunnarts in a range of habitats across the WA portion of the Great Victoria Desert (GVD) bioregion using motion sensor cameras. This has involved the deployment of 140 cameras at 20 sites, which have been widely distributed throughout some of the most remote parts of Australia. Survey sites have been positioned to account for broad vegetation and landform types, recent fire history and ease of access.

In November 2017, the Greening Australia field team completed the second of two survey trips to the GVD, which focused on deployment of motion sensor cameras to detect the species. Despite field crews being tested by a range of challenging conditions during the surveys including wildfires, flooding and often impassable terrain, the survey programme is on schedule. The third and remaining trip to be conducted in December will involve collection of the motion sensor cameras, with subsequent analysis of field data and reporting of survey findings to be complete in early 2018. By the conclusion of the survey programme, the field team will have travelled well over 10,000 km in search of the sparsely distributed species.

Based on our current knowledge of the Sandhill Dunnart and the vast area surveyed, we located some potentially suitable habitat outside of the species' current range.

Should the cameras detect dunnarts in these areas, it will represent an important contribution to our knowledge and will provide a great opportunity for further targeted surveys and land management in partnership with local communities." said Liam Mulcahy, who is leading the survey programme on behalf of Greening Australia.

For further information on the Sandhill Dunnart survey program or Greening Australia's activities more broadly, please contact Liam on (08) 9287 8300 or lmulcahy@greeningaustralia.org.au.

Fire history mapping finished for GVD and Rangelands



Peter Jacklyn
Project Manager

Full fire histories for all the years 2000-2016 are available on NAFI

The Trust contracted the Darwin Centre for Bushfires Research at Charles Darwin University (CDU) to finish the fire history mapping for the Great Victoria Desert and the WA Rangelands.

This completes a project funded originally by Rangelands NRM that added 11 years of fire history (2006-2016) across the WA Rangelands area. A further contract with Roy Hill added the years 2003 – 2005 across the same area and under this latest contract (funded by the Trust) the final years 2000-2002 have now been added which utilises all satellite imagery available from the MODIS satellites.

Now, the full fire histories for all the years 2000-2016 are available and the fire data is viewable and downloadable from the North Australia and Rangelands Fire Information (NAFI) website <http://www.firenorth.org.au>

This work is part of a larger initiative to extend the 250m fire scar mapping available through the NAFI website (www.firenorth.org.au) from the Kimberley to the boundaries of the Wheatbelt in WA.

Peter Jacklyn from CDU, who managed the project, travelled from Cairns to Perth on 31 October to give a practical demonstration on how the data can be used.

It was observed through the work, most areas in the Great Victoria Desert only burnt once in the last 10 years which is not as frequent as areas further north. The big fire years were 2002 and 2012. The western end of the GVD seems to have higher fire frequency than the eastern end. Most burning seemed to occur in spring. The NAFI mapping can be used to see when fires occurred at a coarse scale (250 to 300m) and then Landsat mapping (which is at a finer scale) can be used to see the impact on vegetation. Data can be downloaded from the NAFI website as an image, a shapefile or as a kml file and uploaded to view on Google Earth.

Users can create a variety of reports as the NAFI website takes users to a mirror site, NRM Infonet, which allows users to quantify fire patterns in an area of interest. Some products have been developed but further funding and testing is required to increase reliability, for example, there are plans to include fire intensity/ severity of burning.

If you would like a copy of the final report for this project, contact: Kylie Payne, operations.manager@gvdbiodiversitytrust.org.au

For further information about the NAFI website, contact Peter Jacklyn, peter.jacklyn@cdu.edu.au.

Sandhill Dunnart Camera Survey photos



Survey staff preparing bait tubes for camera installation



A possible Sandhill Dunnart burrow observed at the foot of an unburnt sand hill



An example of a motion sensor camera and bait installation



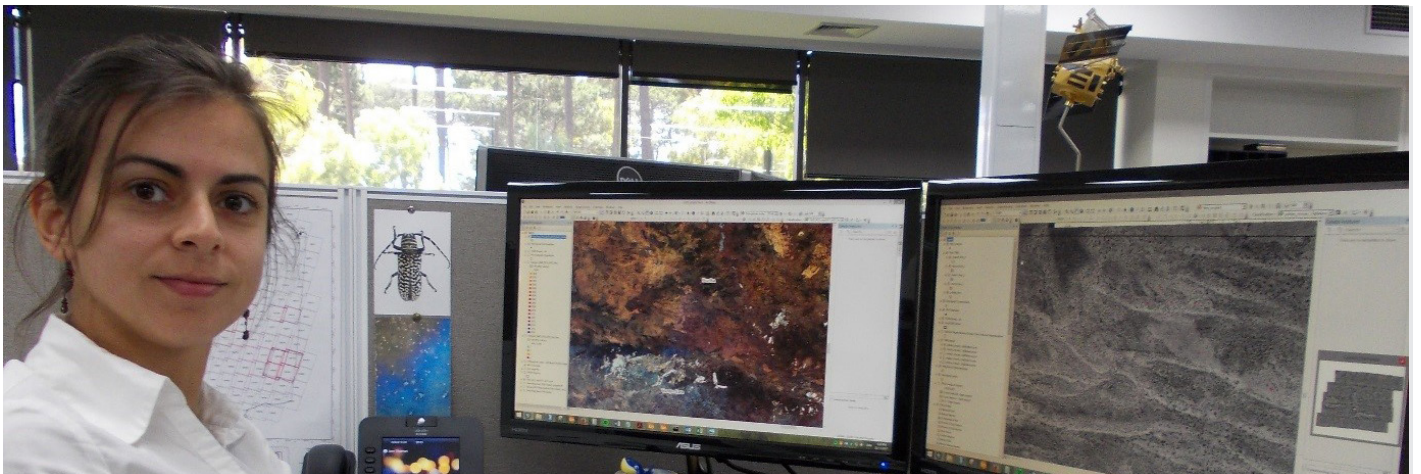
Flooded conditions, encountered twice during field surveys

Interpreting traditional and contemporary fire patterns



Neil Burrows, Project Manager

This project is being conducted by Neil Burrows and colleagues from the Department of Biodiversity Conservation and Attractions (DBCA) with assistance from the Spinifex people.



Jane Chapman, comparing the historical and recent aerial photography for fire scars

Through the Adaptive Management Partnership, consisting of Spinifex Land Management, Yilka Aboriginal Corporation, Central Desert Native Title Services, Rangelands NRM, Greening Australia, the Trust, Conservation Management and the Department of Biodiversity, Conservation and Attractions it was decided that the earliest possible imagery for the GVD should be sought in order to determine the fire regime when Aboriginal people were living on the land and conducting cultural burn activities. The aim of the project is to determine what the land looked like when subject to cultural burns and this used as aspirational guidelines for how burning should occur in the region.

While there was no aerial photography taken over the GVD prior to the military rocket launches at Maralinga in the 1950's, DBCA has found some photography from the 1960's.

The photography is being stitched together to help to better understand traditional Aboriginal burning patterns. Photography was acquired over selected areas where people were most likely living a traditional lifestyle just prior to the photography. A mosaic of 216 photos covering an area of about 1 million hectares, or about 18% of the Spinifex Lands, is being processed for signs of fire scars. It's early days in the analysis, but on many photos there is good evidence of small fires lit by Aboriginal people prior to 1960. The small size of the fires suggests that they were mostly lit under mild weather conditions during the cooler time of year. There is evidence that the bare ground on dune tops was used to contain many fires, also suggesting the fires were low intensity. The old photos

also reveal large areas that have not been recently burnt – probably because the vegetation was not flammable, or people did not visit these areas, or did not burn these areas for cultural reasons. The traditional burning patterns revealed by the 1960/61 photos contrast strongly with the contemporary (2000-2017) fire patterns evident on Landsat satellite imagery, which can be characterised as relatively frequent, large, mostly hot season fires.

A field trip is planned for March 2018 to validate the satellite fire scar imagery, to understand the fire environment of the project area, and to better understand traditional use of fire. An important part of interpreting traditional fire patterns is to understand when, where, why and how the land was burnt, or not burnt in some cases. While some information exists in published documents and oral histories, there is much more to record. It will be important to capture this knowledge from the old people sooner rather than later. Working in partnership with the Spinifex People, this project will capture some information, but there is an urgent need for ongoing work beyond the life of this project.

Once completed in late autumn 2018, this project will have compared and contrasted traditional and contemporary fire patterns, synthesised available oral histories and published information about traditional fire use, and made some observations about ecologically appropriate contemporary fire management options for the flammable, spinifex dominated landscapes of the GVD.

For further information on this project, contact Project Manager, Neil Burrows at neil.burrows@dbca.wa.gov.au.

Award winning Spinifex Rangers working on country

Spinifex Land Management (SLM) Rangers located in the heart of the Great Victoria Desert have been doing a lot of work and it is being recognised!



Pre flight planning which sites will be visited.
Photos by Paul Bulley and Spinifex Land Management.



From left back row: Delwyn Franks, Anton Currie and Fred Grant (front) before taking off in a helicopter to remote spinifex sites.

SLM won the Western Australian Indigenous Landcare Award recently for:

- Traditional Pila Nguru Anangu (Spinifex people) land care practices of fire, water and cultural site management; and
- Innovative responses to more recent environmental threats including buffel grass control and management of camels and other introduced predators.

The Rangers are based in Tjuntjuntjara, 650 kilometres north east of Kalgoorlie and are the second most remote community in Australia.

In October, the Spinifex Rangers were featured in a national television documentary. It was filmed in the Great Victoria Desert in June 2017 when rangers from Australia's ten deserts met to share their experiences and discuss threats facing their lands.

The Spinifex Ranger's 'Our Stories' program which was on NITV can be viewed for a limited time on SBS on demand, Series 2, Episode 16 www.sbs.com.au/ondemand/video/1060022339801/our-stories-spinifex-rangers

In November, the Spinifex community completed a Burn Rule and Biodiversity Mapping project funded by the Trust. The Trust funding was combined with other SLM sourced funding and pre-planned activities to create a memorable and ground breaking 'Back to Country' week for the Spinifex people.

This was a cultural and ecological trip to pass on traditional knowledge from the Tjilpi and Minyma (Elders) to the rangers and other family and community members to improve land management. The Elders and Rangers visited 44 remote sites using a helicopter. They also learnt

skills including how to search for and look after Ngamamara (Malleefowl) and about traditional fire management which was included in the Spinifex People's Healthy Country Plan.

Head ranger, Ethan said, "It was like being an eagle flying over country, covered so much in a few days. I learnt more about country and the tjukurpa from the old people in a few days flying than in all the years travelling through Spinifex in Toyotas."

SLM also applied for funding through the WA Indigenous Ranger Program for a seed ecology project titled "Minyma Uninypa – the Seed Women". This project aims to see a group of Spinifex Women Rangers train with government and industry partners to develop skills and experience to enable them to develop fee for service opportunities in: Investigating and documenting some of the characteristics of native plants in the Great Victoria Desert that are of importance to indigenous culture, mining and other disturbed area rehabilitation and the Bush Tucker industry; Collecting seed for mining rehabilitation programs and/or for sale to the Bush Tucker industry; and Collecting seed and growing seedlings for future community shade tree and landscape rehabilitation programs.

Work will also include the construction of an onsite lab/ training room/seed store and shade house at Tjuntjuntjara community. The Trust is one of a number of organisations who are supporting this project. SLM will find out early next year if their application has been successful.

For further information on any of these projects, contact Pila Nguru Coordinator, Samantha Doudle at pnacadmin@spinifex.org.



YILKA Country - the latest native title determined area in the GVD

Yilka, situated on the western edge of the Great Victoria Desert, is one of Western Australia's most recently determined Native Title areas.



Chelsea Westlake with a newly found wiltja (shelter).

Under the Yilka, Yilka #2 and Sullivan Edwards claims, exclusive native title rights and interests were recognised on country on 27 September, 2017 at Yilurn, an important cultural site. Yilka country is north east of Kalgoorlie, in the Goldfields region and is approximately 12,260 square kilometres in size.

Yilka country is predominantly Aboriginal reserve land, with Yamarna Pastoral Lease also being within the determination area. Cosmo Newberry is the only community within Yilka and has a population of approximately 80 people. While people have been living in the area for thousands of years, Cosmo Newberry began as a pastoral lease for returned soldiers in the 1920s, subsequently becoming a ration depot under the United Aboriginal Mission, following which it was handed to Aboriginal people living in the community.

Yilka has been working closely with Gruyere Gold Mine to assist with its development and construction. Heritage

surveys have been undertaken to ensure that no important cultural sites are impacted on by mining activities. A Malleefowl and traditional ecological knowledge surveys have also been undertaken, along with seed collecting, to assist with site rehabilitation.

As a newly determined Native Title area, Yilka are currently in the process of forming a Ranger team. Having a Ranger team will provide people with a greater opportunity to undertake various heritage and land care activities on Yilka country, such as looking after cultural sites, and threatened species surveys. Ensuring traditional knowledge and practice is retained and passed to future generations is also a high priority for the new Ranger team. Yilka is looking forward to working collaboratively with its neighbours, and also the GVD Biodiversity Trust.

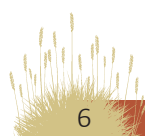
For further information, please contact Bridget Walker, Archaeologist, Yilka Heritage and Land Care Pty Ltd at bridgetwalker@yilka.org.au.



Yilka Country



Undertaking a heritage survey



Meet a Management Panel Member

Norm Galli



Norm Galli on the Management Panel trip to the GVD

When and why did you join the panel?

I was nominated by the Senior Vice President of AngloGold Ashanti for the Australian Region, Mike Erickson, and the General Manager of Tropicana Gold Mine at the time, Duncan Gibbs to replace Mike Le Roy on the Management Panel. Mike Le Roy retired from AngloGold Ashanti in July 2015, vacating his position on the Management Panel in the process.

What's your background/ qualifications /employment history?

I am a professional Environmental Manager with over 20 years of experience in conservation, tourism, environmental management and community relations with Indigenous people. I have risen through the management ranks in a career that realised the position of Officer in Charge of the oldest and one of the most exclusive Game Reserve's in Africa, through to General Manager of a tourism company in the luxury safari market in Botswana and Manager of Sustainability in a gold mining company in Perth, Western Australia.

My career change to mining began with immigration to Australia in 2004, where I have been involved in environmental management with mining and a strong focus on community relations. This journey started with managing environmental matters in an exploration company through to an Environmental Superintendent position on various mine sites, and a Group Environmental Manager in a Corporate Office.

Any quirky interest or interesting facts about yourself that you'd be happy to share with the world? or GVD newsletter readers at least!

I am an avid free diver (mask, snorkel & fins) and spear fisherman with a passion for the ocean.

It is not every day that you survive a Great White Shark attack! In fact, it is a case of second time lucky when it comes to encounters with wildlife.

My first was in South Africa when I was attacked by a black rhino as a Ranger in the 1990s.

Then in October 2015, I was spearfishing off the coast of Albany at Cheynes Beach with a mate when I was attacked with the shark inflicting a wound to my stomach. And it wasn't long before the Chanel 7 new camera's arrived wanting me to tell my story.

What's your interest in the GVD?

I have a broad interest in the GVD ranging from biodiversity, impacts of fire through to achieving the Tropicana Gold Mine Project commitments to approvals.

What's your contribution/role to the GVD Management Panel?

I represent AngloGold Ashanti on the Panel, contribute to scientific input and assist in making informed decisions with regard to expenditure of funds.

Highlight of being part of the GVD.

June 2017 field trip and spending some time on country.

Update from the Operations Managers'



Kylie Payne

The Operations Manager is responsible for managing the Trust and its projects. They are supported by the Trust's Technical Advisory Panel and report to the Trust's Management Panel.

There have been a few changes in the Operations Manager role this year.

Kathryn Sinclair went on maternity leave early in 2017 and Caroline Minton undertook the role until September. We would like to thank Caroline for all the work she did during that time and wish her well in her new position with the City of Perth.

Kylie Payne joined the Trust in September as the interim Operations Manager until Kathryn returned from maternity leave in mid-October. Kathryn & Kylie are now job sharing the role.

A bit about Kylie-

I have had the pleasure of working in a variety of roles in biodiversity conservation, environmental project management, stakeholder engagement and community education – in state and local government and with natural resource management groups for the last 20 years or so.

I started my environmental career working as Landcare Coordinator in Kalgoorlie-Boulder for 10 years and then had roles in Perth, the Midwest and the South West in community biodiversity conservation and roadside conservation and mapping roles.

The GVD role is quite different and in other ways similar to my previous roles. I have learnt a lot and am enjoying interacting with all the stakeholders of the various projects the Trust is funding. My first job was to finalise the contract for the Sandhill Dunnart Camera Trapping Surveys with Greening Australia (see page 1).

I've also been liaising with the Technical Advisory Panel about future projects, communicating with Rangelands NRM, organising presentations and Trust and Adaptive Management Partnership meetings and had networking and learning opportunities at the recent Indigenous Desert Alliance Workshop.

Kathryn will be managing the Sandhill Dunnart projects, Technical Advisory Panel and the Adaptive Management Partnership. While Kylie will be managing the Fire Mapping and Malleefowl projects, compiling the newsletter and updating the website.

There has been quite a lot of new information added to the website since the last newsletter including the GVD BT Annual Report, so please check it out www.gvdbiodiversitytrust.org.au

If you have any information you'd like us to add or update on the website, please let us know.

Kathryn and Kylie wish everyone a Happy Christmas and we look forward to working with you all in the New Year.

Contact the Trust

If you have some GVD research, updates or stories, please forward them to the Trust to share with key stakeholders via the Trust's website and newsletters. Thank you to everyone who has contributed so far. And if you would like to donate to, or partner with, the Trust, then please contact the Trust's Operations Managers: Kathryn Sinclair at kathryn.sinclair@gvdbiodiversitytrust.org.au or on 0407 657 850 or Kylie Payne at operations.manager@gvdbiodiversitytrust.org.au on 0435 657 850.