FRIENDS of the GREAT VICTORIA DESERT PARKS

Newsletter Number 50 January, 2019.

FIELD TRIP REPORT AUGUST 2018 - SURVEY PHOTOS and QUANDONG MONITORING (GROUP 1)

Trip Leader & Logistics Officer – Peter Facy

Activities carried out

Photographing existing vegetation sites
Photograph existing vegetation sites using the drone
Carry out Quandong tree survey as directed by Brett Backhouse

The party was split up into three independent groups each carrying out their specific activities during the day and meeting back together for the night camp where each group would report the day's activities around the campfire, this was very successful as some lively discussions were held.

The original plan was to travel up the Cook road to Voakes Hill corner but there had been some heavy thunderstorms around Cook making the road too wet to travel, so the route was changed to the Ooldea and Lake Dey-Dey roads with the first camp on the Irish Well track.

The following morning (Day 2) the "ground photo" team of myself, Ian Jackson and Jan de Wit left to refuel at Oak Valley and drive south on the Cook road to photograph sites as far south as we could and to camp there the night before joining the rest of the group at the next camp site just south of Voakes Hill corner the next day.

We were unaware that Manfred and Anne had returned to Ceduna for sickness reasons and Fred and Lynne Murray-Walker took their place in the "Drone team" along with Jan Forrest and Marg Mead with Phil Prust, Brian and Gill McKay making up the "Quandong" survey team.

That day they travelled to the campsite 18 Kms south of Voakes Hill corner where they spent two nights, and carried out their activities during the day on the way and around the area.

The ground photo team after having photographed all but two sites near Cook caught up with the main party and continued to photo all the sites east of Voakes Hill corner on the Anne Beadell Highway.

Day 4 we all moved west on the Anne Beadell Highway to a camp site just east of the exclusion zone with teams leap frogging each other as they carried out their activities.

Day 5 was a repeat of the previous day as we all moved to the campsite at Serpentine Lakes with the Drone and the Quandong teams coming in late after a busy day.

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Photos: Two group shots top watching the drone land. Photo Ian Jackson. Below at Serpentine Lakes undergoing drone training. Photo Jan Forrest.

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Field Trip Logistics: vacant
Our book: '*Field Guide to Shrubs and Trees of the Great Victoria Desert*' may be obtained from Peter Facy see email address above.

PRESIDENT'S REPORT - *Jan Forrest OAM*

During 2018 we undertook three field trips. The first was lead by Peter Facy and continued the work started over ten years ago to photograph vegetation sites in the MT Lands by conventional methods and by the drone. The group photographed sites along the Cook Voakes Hill Road and west along the Ann Beadell Highway to the WA border. In addition, a small team located and recorded an additional 50 quandong trees between Waldana Well and the Voakes Hill corner to add to the existing trees being monitored along the Cook Road. Most trees located are in a very sorry state with the 'lollypop' effect being the most disturbing. The camels just leave the top of the tree where they cannot reach leaving a topnot of leaves.

The second trip led by Peter Wilson was to undertake a survey of the 200 Quandong trees nominated by Brett Backhouse DEWNR to assess them for damage created by camels. This is the second survey we have conducted on these trees, his report is included in this newsletter.

The third trip lead by Geoff Rishworth and supported by Harald Ehmann (science) was held during September in the MT Lands. Haralds comprehensive report is contained in this newsletter.

I would like to record with appreciation the support received from the MT Lands council in allowing us to access the MT Lands during the August and September trips. Thanks also to Brett Backhouse for his support especially in setting up drone flight paths for the photo survey team. Alto thanks our Ceduna liaison Pia Richter and Bruce McPerson at DEWNR for his guidance. We also appreciate greatly funding assistance for fuel and permit expenses.

The executive group is now seeking expressions of interest for 2019 trips. Peter Facy has indicated the photo team will visit the sites along the Goog's track next year. Brett is keen for us to visit the Cook Road quandong sites again as well as the new group on the northern part of the Cook Road. In addition we missed photographing several sites east along the Ann Beadell Highway with the drone so this is another project up for grabs.

If you would like to put forward a project proposal to be conducted as a separate trip or in conjunction with existing trips please contact myself, Neil, Peter Wilson or Peter Facy.

Best wishes to all.

Continued from page 1.

The free day at Serpentine was very pleasant where as a group we visited the veg site next to our camp and another across the lake before driving north on the eastern side of the lake to the last veg site where we all had lunch, Jan gave a demonstration with the drone and those who wanted to fly had a practice. The afternoon was free to catch up on any personal duties.

The campfire on the last night included a celebration of Marg Mead's birthday and a wind- up report from all the teams.

Day 7 we split up the group and said goodbye to Jan & Marg, Fred & Lynne and Brian & Gill who travelled back to Ceduna via Oak Valley continuing their activities on the way.

Jan, Phil, Ian and I wound our way back to Ceduna via Ilkurlka, where I delivered 100 of our books to the roadhouse, Neale Breakaways, Connie Sue Highway, Cocklebiddy and the Eyre bird sanctuary.

The Field trip was a success with the Drone team working through their flight paths to come up with a standard criteria for the future, the Quandong team found in excess of 50 trees and the ground photographic team re-photographed 49 existing Veg sites only missing the two just north of Cook.

Both the Drone team and the Quandong teams will present their individual reports.

Peter Facy

Photos: Top right: the land photo team on Serpentine Lakes watched by the drone team. Below: sunset on a sand dune along the Ann Beadell Highway. Photos: Jan Forrest

FIELD TRIP REPORT AUGUST 2018 - SURVEY PHOTOS - DRONE TEAM

Lynne Murray-Walker

The original designated drone team was Jan Forrest, Margaret Mead, Manfred and Anne Jusaitis. The purpose was to photograph selected vegetation plots with the drone to provide additional evidence of changes in the desert by fire, water, drought and camels over the years. DEWNR is shooting camels with helicopters in the area and is interested to see if there is any slowing of degradation of sites by camels.

On Monday morning, 13th August, just out of Ceduna Brett Backhouse demonstrated the original drone team on how the flight programs he had installed for the drone worked. He also provided the quandong monitoring team with Samsung phones and demonstrated how the cyber-tracker program worked. Fred Murray-Walker was to lead this team.

Our first camp was Irish Well. Unfortunately, in the morning Anne Jusaitis became very unwell and Manfred and Anne decided it would be prudent not to continue until Anne had received medical attention. They went back to Ceduna where Anne was assessed and flown by RFDS to the Royal Adelaide Hospital. This meant they were unavailable for the drone team, so Fred and Lynne Murray-Walker kindly offered to take their place. Phil Prust then headed up the quandong team.

On Tuesday, after refuelling at Oak Valley we commenced aerial photography on vegetation plots on the Cook Road south of the Business Road before proceeding to camp 14 on the Voakes Hill Road. Finding the vegetation plots proved to be difficult as Jan had not realized the list was in UTMs and as the GPS was not set up properly the positions were taken from the vehicle log.

We found that not all of the vegetation plots had been programmed as flight paths by Brett so some adhoc flight paths were devised with some difficulty as Jan was not familiar with the program. At one point the drone disappeared over the sanddunes (it was heading to the previous flight). We were very anxious as we watched the drone disappear out of sight and sound. Jan pressed the home button, it stopped but did not return, eventually it did return much to our relief. We managed to photograph three vegetation plots on this road including a recently burnt plot nearest the business road. This plot could be the subject of more attention on future trips to monitor vegetation recovery.

That evening Lynne put all the photo point coordinates into her old etrex (very tedious) and from then on Lynne and Fred in the lead car were able to pinpoint the sites with extreme accuracy.

The following morning Jan practiced manual flight paths as we did not want a repeat of the previous day when it took off to the last site. Turns out that the 'turning on 'sequence for manual flight paths is different to when using a pre-programmed flight path. This will be documented in the drone instruction manual.

We then became a very efficient team! Lynne would walk to the photo point stake, Maggie would follow and put a red fluro vest over the stake with the tag and a yellow fluro one over the direction stake. Jan and Fred would set up the drone and set it off, watching as it photographs the site on the iPad and Maggie keeping it in sight in case anything went wrong. As time progressed we realized it always returned and relaxed a little. The drone flew at 75 metres height and took between 30 and 60 photos. More photos are taken if the height is lower. We mostly landed the drone manually and in the sand ensured a canvas tarp was in place.

Looking at the photos on the iPad it became very clear there is now no privacy in the desert when the drone is in the air. There were some funny moments when we did not know which way it would fly and photograph as some of the flight paths did not appear to fly exactly over the designated plot.

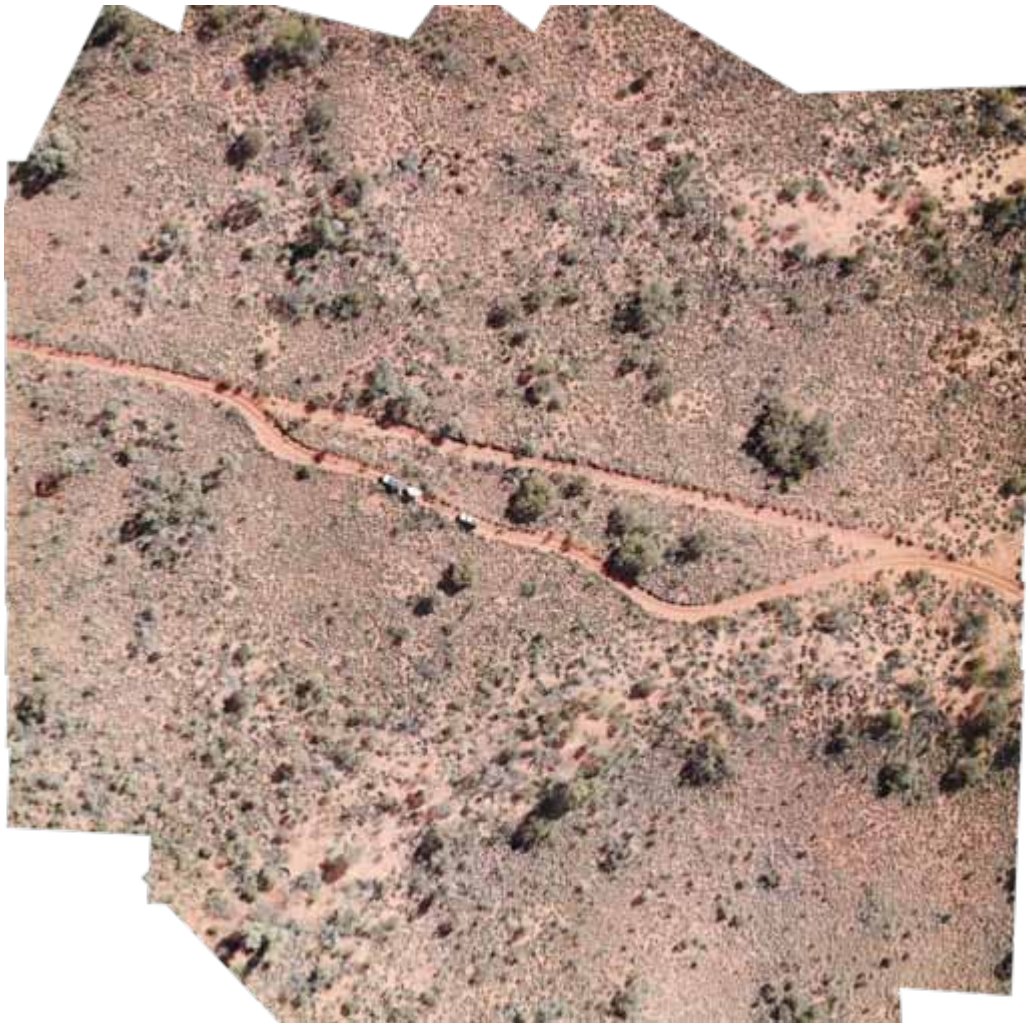
Jan and Margie had experience with the drone on the previous year's May trip and after some instruction Fred became very efficient at setting it up to take off and landing. Everyone had the opportunity to fly the drone at Serpentine Lakes.

All in all we photographed 27 vegetation plots on the Voakes Hill Road, Cook Road and the Ann Beadell Highway.

We celebrated two birthdays. Jan's with a quandong pie (come damper) and custard and Maggie's with birthday fruit cake complete with matchstick candles and chocolate sorbet, choc chip cookies and marshmallows. All taste very good in the desert.

After the trip all the photos taken were provided to Brett to be 'stitched together' as high resolution images of each vegetation plot. We look forward to seeing the results.

Photo: Jan Forrest and Fred Murray-Walker fly the drone at a site off the Anne Beadell Highway. Photo: Lynne Murray-Walker



Low resolution 'stitched' drone photo: the vegetation plot for this one is actually in the lower half of the image, demonstrating that the flight paths did not always fly exactly of the designated site. We are hopeful that the high resolution images will show the location of the photo point stake (with fluro vest on) as these low resolution, quick reference images do not show a lot of detail.

Photos: Top. at Serpentine Lakes, Lynne Murray-Walker and Jan Forrest, Middle: Gil, McKay, Margie Mead and Jan. Top right: Desert Kurrajong *Brachychiton gregorii.* Centre left: Serpentine Lakes and below scorpion on the lake surface. Middle right: *Triodia* sp. rings and below dragon Lizard. Photos: Jan Forrest and Lynne Murray-Walker.

P FACY LED AUGUST 2018 FIELD TRIP
QUANDONG TEAM REPORT - *Brian and Gill McKay*

This is a brief report on the activities of the Quandong Team, which was one of three that took part in the above field trip. All members of the Group shared the same camp sites in the evenings, but the three teams worked individually during the day. After the unfortunate departure of Manfred and Anne Jusaitis early on Day 2, the Quandong Team comprised Phil Prust and Gill & Brian McKay.

On the morning of Day 1, we received training in the use of the cyber-trackers from Brett Backhouse on a roadside stop about 30 km west of Ceduna . It was explained to us that the purpose of the work was to set up an ongoing monitoring progam to assess damage apparently being caused to quandong trees by camels. It was suggested that only trees within 100m of roads / tracks should be surveyed, otherwise ongoing monitoring would be too onerous.

On the afternoon of Day 2 on Voakes Hill Road north of the Business Road, we located a couple of the quandong trees found last year to familiarise ourselves with what we were looking for in our mission to locate and report on the condition of any additional trees that we could find. Thereafter we set to work.

Over the next two days 20 - 30 new quandong trees were found along the Voakes Hill Road, and processed as required. Every tree found was mature (4 to 5m in height), severely damaged, and that damage did not appear to be recent. Refer to Photo 1. A few dead trees were also found. Quite often there was another tree (or other trees) within a 50m radius of the first found.

We then had 4 days in total along the Anne Beadell Highway west of Voakes Hill Road to the WA border. Very few quandongs were sighted. We are indebted to the drone team for finding more than half of the few that were found along that road, and drawing our attention to them Refer photo 2. Very few of those listed in the Living Atlas of Australia were found. (The coordinates for several were well off the road in any event).

Not a single young tree had been sighted up to that point. We were even starting to wonder whether we were failing to recognise young quandong trees!

The party split at Serpentine Lakes, which meant that we lost Phil who accompanied the photographic team into Western Australia. Thereafter, to compensate and for safety reasons, we tended to travel and work together with the drone team (Jan Forrest, Margaret Mead, and Fred and Lynne Murray-Walker) given its proven aptitude at finding quandong trees! Once we got back to Voakes Hill Road, we searched the section south of where we had worked previously, and again found good numbers of quandong trees, until time demanded that we proceed with our return trip.

Approximately 30km of the Voakes Hill Road, south from its junction with the Anne Beadell Highway has now been well searched. In all, the team located and processed over 50 'new' quandong trees in the foregoing areas for ongoing monitoring.

We believe that future searches would best be directed further south from our searched section. Also, time did not permit a search along the Anne Beadell Highway east of the junction with Voakes Hill Road, nor in Voakes Hill itself.

The huge surprise for us was on the last day, when we thought our work was well & truly done. We pulled up for lunch in the camp area at the Oak Valley turn-off from the Maralinga Road, and were immediately confronted with a mature, healthy, un-molested quandong tree. The more we looked around, the more trees we found Refer photo 3 - ranging from fully grown, mature trees to young ones about 1 metre in height, Photo 4 with Margaret Mead. Many of these trees were in clusters. Camel footprints were in evidence, although they did not appear to be recent. There was no sign that any of the trees in this 'grove' had ever been touched by camels.
So, the big, unresolved question is ..... What is different about this locality? Why have the camels not damaged the quandong trees in this area? Worthy of further investigation by someone more knowledgeable than us.

Above Photo 1. Top right: Photo 2 along the Ann Beadel Hwy. Photo 3. unmolested trees Photo 4. Young Trees. Photos: B & G McKay (1, 3) and JForrest (2,4).

FIELD TRIP REPORT AUGUST 2018 (GROUP 2)

QUANDONG SURVEY - *Peter Wilson*

Trip Leader & logistics Officer - Peter Wilson

Purpose of Trip

To build on the data gathered in 2017 by undertaking a repeat survey of the quandong trees nominated by Brett Backhouse DEW on the Rodina (BRM 6) track and Voakes Hill Rd using the same mythology and process utilized in 2017. The data was recorded on a cyber tracking system and down loaded onto the DEW data base on our return to Ceduna. In addition to this activity the group also endeavored to identify and record new growth either by the germination of seed or suckering using information provided Harald Ehmann.

The members of the team:

Lynton & Karen Huxley
Kevin & Fiona OConnor
Des & Flora Bain
Barbara Rayner & Peter Wilson

As we all left Adelaide at different time we arranged to meet on Sunday 19 August at the Foreshore Hotel Ceduna for dinner and to discuss the relevant information relating to the trip. The next morning Monday 20th August we meet Codee Spitzkowsky DEW to collect the Cyber Trackers, Sat Phone and an Eperb. As we didn't need the same level of training as the previous year we left Ceduna by 10 am. to head north through Ooldea to our first camp at Irish Well. Just after setting up camp Fred & Lynne Murray Walker arrived to camp the night on their return from Peter Facy's trip.

The next day we left for our camp on the Rodina Track via Oak Valley to refuel and a much deserved ice cream and by chance met Jan Forrest, Margaret Mead and Brian & Gill McKay who were also returning from the Peter Facy trip.

The next morning we commence the survey of the first 70 trees on the Rodina Track. Unlike in 2017 where we experienced difficulties in finding the first trees we were able to commence the survey straight away. This was due to Brett Backhouse having arranging for a star picket with an aluminum to be placed north of each tree with the tree number. In addition to this Brett also provided us with a data sheet for each tree showing the photo and the data we collected last year. These two additional items made a considerable difference and will assist with future surveys by ensuring consistency of data collection.

It soon became evident after surveying the first 15 trees that the damage to the trees by the camels since 2017 was considerable. This was also observed by Peter Facy's group to trees further north on the Voakes Hill Rd. It is estimated that 50 -60% of the trees surveyed showed signs of damage to varying degree. Also compared to last year we observed very little ripe fruit or flowers. This may have been in part due to the fact that we conducted survey 2 weeks earlier than in 2017.

However, the pleasing aspect of the trip was that Fiona OConnor was able to identify and record new growth either from seed germination or suckering to approximately 48 of the trees. Where this was observed the tree tag and the new growth was photographed and handed over to Harald Ehmann to enable him to visit each tree and verify the new growth.

Although we completed the survey on the BRM6 within 2 days we stayed an additional day due to the fact that it rained/drizzled all Friday. However the next day it cleared and we headed for our camp on Voakes Hill Rd.

On Sunday 12 we commenced the Voakes Hill Rd survey and completed the 110 trees by Tuesday. The following day we headed for our camp at Irish Well via Oak Valley to meet Ben Deslandes the new Ranger based at Oak Valley. We spent 2 hours with Ben who outlined his role and vision for the GVD. He also indicated that there was going to be strategic planning day in which the FOGVD would be invited to participate.

At 2 PM we set of for Irish Well, however, by 2.30 the wind had increased to a point where we had to stop on a couple of occasions due to lack of visibility. Then at about 4pm we encountered a fire about 50km out of Oak Valley which also slowed us up. The wind settled after setting up camp and we were then entertained by an electrical storm on all 4 points of the compass for about 2 hours. However, the weather was not done with us and at 4 in the morning it started to rain and continued to 6.30. Initially I thought we may be at the Irish Well for a couple of days but the road held up well and we made it in time to hand over the equipment to the Ceduna DEW Office..

Bird watching

Although there was not a lot of time for Bird watching Lynton, Karen, Fiona & Kevin did undertake a couple of trips, one to the Rodina Airport track and another to the Ann Beadell. Attached is a list of the birds that were sighted.

On returning to Adelaide a discussion has been had with Brett Backhouse DEW who indicated that the Data was successfully downloaded on to their system and that he hoped that funding would be available to continue the Quandong survey in 2019.

Typical campsite. Photo Lynton Huxley.





Top left: checking out a quandong tree. Right Fiona counting fruits. Above: some enquiring visitors! Photos: Lynton Huxley

BIRD LIST AUGUST 2018

Wedge-tailed Eagle
Nankeen Kestrel
Brown Falcon
Australian Hobby
Galah
Australian Ringneck
Mulga Parrot
Budgerigar
Southern Boobook Owl (heard)
Australian Owlet-nightjar (heard)
White-browed Treecreeper
Splendid Fairy-wren
Yellow-rumped Thornbill
Chestnut-rumped Thornbill
Inland Thornbill
Weebill
Southern Whiteface
Spiny-cheeked Honeyeater
Yellow-throated Miner
Singing Honeyeater
Grey-fronted Honeyeater
White-fronted Honeyeater
Red-capped Robin
Jacky Winter
Crested Bellbird
Rufous Whistler
Grey Shrikethrush
Willie Wagtail
Black-faced Cuckoo-shrike
Black-faced Woodswallow
Grey Butcherbird
Australian Magpie
Australian Raven
Zebra Finch
White-backed Swallow
Tree Martin
Total 36 Species






Bird photos: Top: Male Red-capped Robin, Tree Martin. Below: Brown Falcon (brown morph), Southern Whiteface. Below: Budgerigars, Southern Whiteface side view. Bottom: Crested Bellbird singing, Male Zebra finch. Photos: Lynton Huxley.

FGVD EXPEDITION SEPTEMBER 3 -14, 2018 (GROUP 3)

Ali Lawrence

With a lifetime of bushwalking, for me the expedition was a chance to see how desert research is undertaken and to visit a part of Australia unknown to me. With no particular qualifications in the relevant subjects, my skills lie more in having years of dirt road traveling in remote regions and the ability to 'make do' in most circumstances.

Participants were Geoff Rishworth (leader), Harald Ehmann (science), Elisa Ehmann, Margaret and Peter Wright, Ali and Julian Lawrence, in four vehicles - two 4WD cars and two 4WD motorhomes - one an OKA, one on a Mitsubishi Canter frame.

In Ceduna the necessary equipment, such as maps and cyber trackers, was collected and in convoy we set off. The expedition stalled on Day 1 at the junction of the Dey Dey and Maralinga Roads, when Harald's vehicle developed steering problems.

After a complete day's radical surgery, including welding by 'bush mechanic' Peter, and two nights spent on the track, we were able to continue. This, in addition to various punctures later, along with the nature of tracks in the area, showed the importance of having a robust 4WD vehicle and plenty of tools and spare tyres.

At Oak Valley we learnt about a project for training rangers on land management, the 10 Deserts Project, 'cat assassin' machines and local conditions.

Traveling on the major dirt road highways was easy going. The less-used tracks varied from easy with a bit of soft sand, to quite overgrown and therefore slow. We did our bit for track maintenance by removing fallen branches and driving over vegetation in the way. Having a variety of maps, mostly electronic, was useful for navigation. Our campsites, six in all, varied from beside a small dry lake (where we checked for camel impacts on Quandong trees), to both ends of the Airport Track, south of the Business Road, and just south of the Irish Well turnoff.

My usual habit is to set off early and complete all traveling and activities by early afternoon, leaving plenty of time for rest and reflection. Fieldwork is very different. Its stop-start nature, involving inspections of points of interest in different places throughout the day, was quite tiring. Late starts and late afternoon finishes were common, the former allowing time for those in cars time to pack up swags and tents.

Being a new member of FGVD my expectations were vague. My role as a support person was never properly explained. Being instructed in some aspect of fieldwork and sent out to do it never happened. It became apparent early on that apart from providing company and safety-in-numbers in case of adversity, nothing much was required of me.

This did not interfere in any way with my enjoyment of this unique desert environment. The changes of vegetation as we progressed across it were always of interest, arousing speculation as to the cause and effect of the underlying geology, sand dunes and run-off from rainfall. Examining the ground to 'read the news' of which creatures were around was always fascinating and an evening communal campfire was a good way to end each day.

Navigation on foot during fieldwork was done with an eye for where the vehicles were parked. One personal hand-held GPS, showing by a trail of electronic breadcrumbs on the screen how to return, failed early on. Such devices can be an extra bit of insurance in such terrain where getting lost is easy. Footprints on sand can be followed back to one's starting point; on hard, stony ground this is more difficult. Nobody got lost though, and some of us managed to find a point of degree confluence – a convergence of whole-number lines of latitude and longitude.

Fieldwork was varied and mostly took place within easy reach of a road, ranging from ongoing inspection of both numbered and random quandong trees for camel, storm and fire damage, of desert poplars at specific points for regeneration after known fires, videoing certain areas by drone to check anomalies and to establish the extent of Wyola mallee spread, not as rare as expected, inspection of marble gums for birdlife and digging trenches to check for marsupial mole activity. By crossing a paleo channel (ancient watercourse) we saw the distinct vegetation changes on either side.

The non-scientists of the group helped where possible, following around those more experienced and picking their brains at every opportunity. In this manner my knowledge of the desert and what lives there expanded along with my understanding of the importance of fire for plant regeneration and diversity.

Birds were heard more than seen. No long tailed parrots were spotted. Of animals, several kangaroos and a hopping mouse were seen and a dingo heard one night. Sadly feral animals were much more abundant, such as foxes, rabbits and camels. The latter seemed quite prevalent. Their prints showed that they use vehicle tracks, some giving us races of up to 40 kph before finally moving out of the way. Their travel patterns aroused discussion, as well as whether quandongs further from tracks have a better chance of escaping their attention.

On our return to Oak Valley we visited the welcoming and colourful school, where Harald did a show and tell.
Thanks to Geoff for organising the expedition and to Harald for sharing his knowledge so generously.

Photos: Top left. Bush mechanics on the job. Above: Harald and team checking out Desert Poplar growth sites. Photos: Peter Wright

BRIEF REPORT ON FIELDWORK IN MARALINGA TJARUTJA - EARLY SEPTEMBER 2018

Harald Ehmann text and images

Sincere thanks:
To Oak Valley Elders and Community members for cultural and other advice, and permission to visit and do field work. To Robbie Sleep, Brett Backhouse and Codee Spitzkowski of NRMAW for essential support, information and resourcing. To Ben Deslandes of the Maralinga Tjarutja Council for detailed local NRM advice. To fellow team members Geoff Rishworth (leader), Peter and Margaret Wright, Julian and Ali Lawrence and Elisa Ehmann for strong support and involvement in the fieldwork as well as unexpected significant chassis repair work to my vehicle. And to Peter Wilson's group who made a thorough study of the established quandong (Wyanu) sites and provided us with a comprehensive set of images of all the suckers and seedlings they found, primarily in the more westerly sites

Our group photographed from the drone at a Wyola Mallee patch that was burnt in 2007, from left to right: Julian and Ali Lawrence, Harald Ehmann, Geoff Rishworth, Margaret and Peter Wright, and Elisa Ehmann (in the front vehicle). There were a few juvenile trees that had grown from seed soon after the burn (none seen in this image) as well as many mallees that had recovered from their lignotuber, including the silvery-grey Wyola mallees in the background

Field conditions overview:
We enjoyed the splendor of the diverse Maralinga Tjarutja ecosystems, plants and animals and landscapes comprehensively, frequently in a contemplative way. Despite the highest-on-record rains in January (especially in the western areas) there had not been any significant follow up rains since. The country had the general appearance of being in drought during our visit although it was obvious that many (but not all) plants had flowered (esp. *Triodia*) and also had significant growth after the January rains. This emphasizes the importance of good follow up rains to bring a boom year.

(Wyanu (Quandong) studies:
Peter Wilson's group found that there had been a significant reduction in the canopy sizes between their 2017 and 2018 readings. The reductions are only apparent when comparing the successive images, and are not evident from observations made only in 2018 of the actual condition of the plants.

During our fieldwork the on-site appearance of the trees in 2018 (without seeing the 2017 images) suggested no obvious substantial camel reduction! One explanation is that the significant reduction since 2017 occurred soon after the 2017 images were made and that following the high January rains the trees had a rapid and prolific growth flush that obscured the earlier camel reduction. Nonetheless almost all of the trees generally did not recover to their 2017 photographed sizes.

Many of the trees on the western side (along the Rig Rd, ie the trees tagged with BMR + number) showed relatively recent tip regrowth of about three months of age. This is consistent with a reduction of grazing pressure following a major camel cull in the area during May and June. This same degree of regrowth was not so obvious on the trees along the Voakes Hill Rd which had lighter rains in January

Typical tip regrowth of about three months of age on a Wyanu tree along the Rig Rd (BMR numbered transect). This recovery is very likely correlated with the camel cull in the area about three months earlier.

The many examples of recruitment found by Peter Wilson's group appear to be mostly suckers. We noticed that some suckers and seedlings had some leaves partly eaten off, possibly by rabbits (based on the height of the herbivory). While still in relatively low numbers, we did see more rabbits during this year's trip (approx. 8) than on any trip in the past.

Many larger Wyanu trees that had long-term lower canopy loss probably from camel browsing and breakage also had an upper canopy that was out of reach to camels which had a distinctive lollipop shape. This feature does help in spotting Wyanu trees. We did encounter three different extensive occurrences of Wyanu that could be set up as additional and comparative monitoring transects.

Some fresh branches of Wyanu had been broken off by strong winds, as evidenced by their distance from their trees and an absence of any recent camel tracks around the trees. Wind damage and camel damage can look very similar, especially with wilt and track obscuring if the damage is older than a week or two.

At one relatively tall tree there were obvious very fresh and high branch breakages done by an adult camel. The broken branches were on the ground and only partly and lightly eaten. The camel tracks in the immediate vicinity were made by two cows accompanied by two very young calves. It is likely that the mothers provided their calves with branches that were otherwise out-of-reach.

We found one near-dead and several dead Wyanu trees in long-unburnt areas, all without leaves. In some cases their death appears to be due only in part to camel damage. In

addition a few had no apparent camel damage yet had also died, suggesting resources stress, specifically water and probably also nutrients. Wyanu are known to be root parasites that obtain both water and nutrients from their hosts. In long-unburnt areas their access to new and vigorously growing shrubs and trees is likely lower than in recently burnt country, and therefore a limiting (and potentially lethal) factor. Vigorous regrowth usually occurs in the first 10 or so years after fire. These observations suggest that careful control burning may help Wyanu. Wyanu near vehicle tracks, camel paths (well away from vehicle tracks), and dry lake edges were generally more heavily impacted by camels than those that are some distance (about 100 to 150m). Camel pads are particularly well developed near and through clay pans and dry lakes, so Wyanu growing in their vicinity are without doubt strongly impacted by camels.

An example of a Wyanu near a small dry lake showing major and on-going browsing by camels. Such sustained and repeated knock-back will likely result in the decline and death of Wyanu in such areas.

Wyanu that are growing on stony ground, or surrounded by stony ground, or are near stony vehicle tracks are less likely to be impacted by camels. Camel walking footprints along tracks and roads clearly follow the tyre rut that is less stony. When the road has been completely graveled (eg. through deep sandy areas) camels avoid the stones by walking on the soft sand adjacent to the road.

We also evaluated the palatability of Wyanu leaves in the hope of finding a correlation that might help explain the variability in camel damage that has been reported. The taste of leaves (chewed lightly, spat out, then tasted) from different trees varied from bland and mild to strongly astringent and bitter. But trees with all tastes had been browsed by camels, and some both mild AND strong tasting trees were untouched by camels. Thus relative palatability to humans is no indicator of same to camels.

Para (Marble Gum) studies:
We took drone imagery of extensive and representative areas of Para in their typical situation (ie on dune flanks, crests and adjoining sandy areas) at three sites with different fire histories, namely mature trees in a long-unburnt area, another area burnt in 2002 and an adjoining area burnt in 2015. These images will provide high resolution comparison imagery with the available satellite imagery for the whole of the area in which Para occur.

Wyola Mallee studies:
We recorded data at the two fire recovery sites set up in August 2015 at the type locality (near the Cross Roads) that was partly burnt in early 2015, including re-taking the photopoints images. In the WMb02 quadrat site there were 16 Wyola Mallee juveniles and one hybrid juvenile still alive, and in the WMb01 quadrat site there were 37 other live eucalypt juveniles. The *Triodia* plants have increased significantly in size and have in-filled the bare soil spaces (of 2016-7) sufficiently that a natural fire this summer would likely be carried. This was the third reading

Reading the WMb02.1 monitoring site at the Wyola Mallee type locality that was partly burnt in early 2015. Note the infill of still small Triodia *grass hummocks between the juvenile Wyola Mallees that would now carry a fire were it pushed by wind.*

We imaged two representative Wyola Mallee patches of the 30 patches found in the past 4 years using the drone, namely one patch burnt in 2007 (see the first report image), and another long-unburnt patch. The imagery is being "stitched" together by NRMAW in Ceduna for use in ongoing assessment.

Itjari-itjari (Marsupial Mole) studies:
We dug four trenches close to two of our trip camp sites, two trenches near the 2016/18 camp site (on an upper dune flank) and two near the last of the 2018 campsites (on a dune flank and in a sandy swale). We detected Itjari-itjari tunnelling in only one of the 2016/18 upper dune flank trenches. The second two trenches were in an area of isolated dunes, and it is possible that it is an insufficient area to support a viable population of Itjari-itjari. This possibility could be checked further next year.

A large bardi grub (beetle larva) found in association with an old Itjari-itjari tunnel. Note its large jaws used to cut the downward-hanging roots it encounters with its long brush-like digging legs.

While checking a trench at the 2016/8 camp Geoff found a large bardi grub near an old Itjari-itjari tunnel (see picture). We studied this grub for some time, and by watching its mode of progressing in the sand (best described as tumble-tunneling), by checking the soil and the grub's tunnels, and with follow-up captive study of the grub's feeding we could determine that it "grazes" on plant roots. Such vertical roots (particularly of grasses) are common in the consolidated sand at depths around 20 to 30 cm. Such grubs are likely one of the foods of Itjari-itjari.

Wipu Wara (Long-tailed Parrot aka Princess Parrot) studies:
These magnificent birds were not seen this year, including at each of the sites where they were seen in previous years. Despite the record high rainfalls in the area during January the entire area visited in September had the appearance of being in drought condition.

Desert Poplar growth studies:
We re-photographed (but not with the drone) the four Desert Poplar sites set up in 2017 at sites burnt in 2012, 2013, 2014 and 2015. This was the second reading.

Birds and reptiles encountered:
Malleefowl, we re-visited the nest checked in 2017. No evidence of use in the past year was seen.

Scarlet-chested Parrot, we saw about six bird in pairs in long-unburnt areas during our visit.

Hopping mice (*Notomys alexis*), we had extensive tracks around our 2016/2018 camp, and two were seen feeding and pulling on a dropped piece of bread. The *Triodia* had seeded strongly earlier this year.

Beaded Gecko (*Lucasium damaeum*), about 15 were seen on three warm nights, with a male and female involved in courting behaviour on 04.09.2018 at 22h30, air temperature 20 deg C.

Crested Bicycle Dragon (*Ctenophorus cristatus*), about 20 were seen active during warm days including one male in full breeding colour on 13.09.2018.

Western Bearded Dragon (*Pogona minor*), six were seen active during warm days, including a gravid female digging out an oviposition burrow into the hard roadside surface on 05.09.2018 at 16h30, air temperature 27 deg C, approximately 10 km W of Oak Valley.

The female Western Bearded Dragon with an egg-distended belly above the entrance to her nesting chamber into which she will probably lay her eggs. Note the faded tire track and an earlier start to digging a nesting burrow.

Mulga Pygmy Monitor (*Varanus gilleni*), one subadult female seen with about a third of her tail missing (well-healed) sunning on fallen bark at the base of a dead small tree on 04.09.2018 at 11h45, air temperature 28 deg C, at Oak Valley Rd turnoff from Maralinga bitumen.

Western Blue-tongue (*Tiliqua occipitalis*), one adult female seen active on 11.09.2018 at 14h15, air temperature 24.5 deg C, 0.6 km S of the Rig Rd and Para Rd corner.

Sleepy Lizard (*Tiliqua rugosa*), about 20 seen active during sunny days, including one courtship pair on 03.09.2018 at 13h00, air temperature 15 deg C, along the Iluka bitumen, and seven pairs on 16.09.2018 in the early afternoon, air temperatures 20 to 23 deg C near the Head of Bight. All sightings were on the Nullarbor Plain.

Mulga Snake (*Pseudechis australis*), one large adult seen active on 11.09.2018 at 10h00, air temperature 23 deg C, 0.9 km S of the Rig Rd and Para Rd corner.

NOTES ON AN EXPEDITION

Ali Lawrence

The desert is a wondrous place,
It seethes with predator and prey
And daily shows a different face.
Is it life or death today?

Creatures lie in wait for dinner,
Dog eat dog and snake eat skink.
If you touch that, you'll be a goner,
Things aren't always what you think.

Fieldwork takes place on the ground
While up above the drone sets off.
Work goes on, bums up, heads down,
And wait for data from aloft.

When asked 'what's this?" at question time,
The expert frowned and scratched his head.
Then with a curious smile he turned,
'It's just a wampah,' he said.

A trench was dug with sheer straight sides,
Really just a shallow hole,
All to look for any signs
Of the illusive marsupial mole.

Predators with fur aglow,
They're blind and tunnel underground.
This golden treasure failed to show,
Instead a Bardi grub was found.

A check of quandongs can impart
That some are doomed, both far and near.
Fires and storms all play their part,
But something else is at work here.

If it's any consolation,
Quandong leaves don't go to waste,
For there is an explanation,
Camels - they just like the taste.

Their depredations are a scandal,
Browsing far and wide unshod.
Feral pest and untamed vandal,
There's no ground they leave untrod.

The desert's neither friend nor foe,
Its plants and wildlife can beguile.
Will it last – how can we know?
We're honoured just to stay a while.

Butterfly Conservation South Australia Inc.

presents

a PUBLIC TALKS PROGRAM for 2019

www.butterflygardening.net.au

On the first Tuesday of the month March to November at 6.15pm for a prompt 6.30pm start.

At the Plympton Community Centre
34 Long Street, Plympton.
(200 metres E of Marion Rd, and 300 metres N of Anzac Highway).

Public transport options include:
Bus from the city via Anzac Highway.
Routes: 245, 248, 262, 263, 265, M44, N262.
Bus from the city via Marion Road.
Routes 100, 101, H20.
Entry by donation (minimum of $2)
Bookings not required
Please bring supper to share and your own cup, tea/ coffee will be supplied.
Meetings should conclude by 8.30pm.
At the start of each meeting a ten minute presentation on a *'Butterfly of the Month'* will be given by a BCSA committee member.

DON'T FORGET TO BYO CUP.

Photo LFHunt. Wood White butterfly *Delias aganippe*

PUBLIC TALKS PROGRAM 2019

5th March: ***Land Snails*** - Would you recognise a native South Australian land snail if you saw one? . Presented by Peter Hunt a long term member of the Malacological Society.

2nd April: ***The Kingdom of Fungi - variety and importance.*** Mycologist Pam Catcheside will look at the fungal kingdom, the variety of fungi, their ecology and their roles in the environment.

7th May: ***The rise of Animal life: the Cambrian 'explosion'*** - The Cambrian fossils of Kangaroo Island are among the most important in the Southern Hemisphere, and they represent the earliest complex animals in the planet. Presented by Associate Professor Diego Garcia-Bellido

4th June: ***Arid Lands Botanic Garden*** - Chairman John Zwar will cover the history of the Arid Lands Botanic Garden since he first proposed the establishment of the Garden in 1981,

2nd July: **2nd July** ***How to build a National Park*** - The Glenthorne property has had a long and diverse history. Alan Burns will outline the history leading up to the March 2018 State election when the 22 year fight to save the property was won and the steps taken since to make Minister David Speirs' promise to build the Glenthorne National Park from bare paddocks, a reality.

6th August: ***Restoring the reefs we never knew we lost*** - Presented by Dominic McAfee.

3rd September: 6.30pm BCSA AGM 7.00pm Public Talk ***Protecting Southern Hairy-nosed Wombats in the Mallee*** - Presented by Dr. Peter Clements, President, Wombats SA.

1st October: ***Parasites: the silent majority.*** The World's biota probably includes more parasitic than non-parasitic species Em. Professor Lesley Warner will delve into this fascinatig topic.

5th November: ***Evolution of the southern Australian vegetation – the World's biggest climate change experiment*** - Presented by Professor Bob Hill

A more detailed program is available from Jan Forrest/

DIARY DATES

MEETINGS

NEXT GENERAL MEETING: and ANNUAL GENERAL MEETING: Our next meeting will be at **7:30 pm on Friday 1st February 2019** at the Sports SA Industry Skills Centre on Military Rd at West Beach (across the road from the West Beach Caravan park). All members and prospective members are welcome. The agenda will be available before the meeting in the member's area of the website http://www.communitywebs.org/fgvd/

2019 MEETING DATES: Friday **7th June** and Friday **1st November** at the Sports SA Industry Skills Centre as above.

SUGGESTED 2019 FIELD TRIPS:
Proposal 1: Location Googs Track - Projects - photograph vegetation sites (standard procedure also with the drone). Trip leader Peter Facy.

Proposal 2: Location: MT Lands. Voakes Hill Track and BMR (Rodinia track. East/West) Business Road. Projects: monitor and record damage to Quandong trees caused by Camels. Locate and map Buffel grass and Wards Weed infestations. Trip leader: either Peter Wilson or Lynton Huxley (or jointly!).

Proposal 3: It is suggested a second trip quandong monitoring trip could be organised with two groups but camping together. Location 1: between Waldana Well and Voakes Hill - Project 1. to monitor quandong trees located in 2018 Location 2: Cook Road south of the Business Road and around east of Voakes Hill junction (about 8 sites) Project 2: photograph vegetation sites with the drone (those not completed in 2018). Trip leader: vacant.

Expression of interest are sought for further trips or projects and trip leaders.
Please contact President Jan Forrest OAM or Secretary Neil Matthews OAM

COMMITTEE MEMBERS

Jan Forrest OAM	President	president@fgvd.org.au
Peter Wilson	Vice President	
Neil Matthews OAM	Secretary	secretary@fgvd.org.au
Peter Facy	Treasurer	treasurer@fgvd.org.au
vacant	Logistics officer	

WEB LINKS

DEH information on Mamungari Conservation Park:
http://www.parks.sa.gov.au/mamungari/index.htm
Friends of Great Victoria Desert:
http:// www.communitywebs.org/fgvd/