



Bushwalk from Grindell's Hut to Snell Memorial

On Tuesday 20th April, Rob, Henry, Libby, Wayne and I walked north from Grindell's hut in search of petroglyphs and the memorial to George Snell. Ray Hickman supplied the suggested route that had been followed by other walkers and was within the Wortupa Loop vehicle track. We left the cars at the ablution block carpark, near the Grindell campground. The suggested path crossed the Balcanoona Creek and headed north, and then NNE towards the entrance of a gorge, about 3.5km from our start point. The terrain along the way was very dry; however the gorge was narrow and interesting. One side was markedly sloped along the tilt of the slate-like rock-face. The gorge had several small pools of water, probably the remnant from rainfalls in March, two or three weeks earlier.



Above: - John Grindell's original hut (Roger Buddle).

Right: - The terrain towards the gorge.

The main creek heads north, but our intended path was to follow a smaller creek to the north east. We took the wrong branch before we noticed our error and had to back track.

The north east creek rises rapidly and is contained within a charming mini-gorge carved out of rock with several small waterfalls, one above the other, that were small enough (1m to 3m tall) to make it fun to easily clamber up them. There were some small pools of water in this gorge too. After climbing out of this creek we could see the road – the one-way drive Wortupa Loop track. Almost all of the vegetation was dead after the drought. We eventually walked out onto the track, mistakenly thinking that the Snell memorial was on the road. Along the roadside we saw some fruit on a *Marsdenia australis* vine, peculiarly named bush pear or bush banana.





Left: - The Wortupa Loop track, looking south, close to the Snell memorial.

The Snell memorial is located about 200m east of the road, at AGD 84 54 J 326443 6629455. It is the site at which his burnt remains were found.

John Grindell, who had stated his innocence throughout the trial, was sentenced to death by hanging at the Adelaide Gaol on 2 January 1919.

During December a petition was presented to save Grindell but the government considered the evidence against him so strong that the request was denied. After several more petitions from Grindell's wife, daughter (George Snell's wife) and sons and those from the Rev F. Webb and Mrs Annie Collins the sentence was commuted to life imprisonment. Perhaps that was Grindell's only stroke of luck! Ten years later John Grindell, seventy-five years old, was released from gaol. He died in May 1930."



Above: *Marsdenia australis* (bush pear or bush banana)

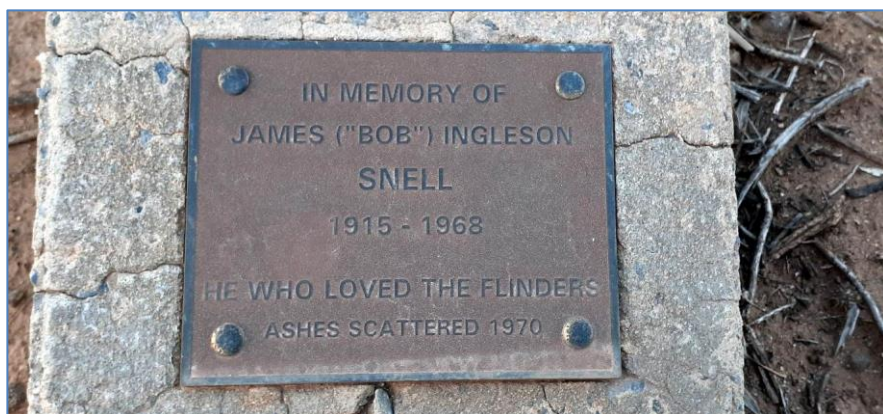
From the plaques, we walked north-west to locate the creek we were to follow south to the high ground near hill 484m. From here we were about three kilometres from the cars and we could see Grindell's hut and the vehicles. We could also see our path home descending along the crests and then heading south-east through undulating ground back to our starting point. Despite looking for them, we saw no Iga, Quandong or Slender Bell-fruit trees.



Left: - The dual plaques which are the memorial to George Snell. In the foreground is the cemented rock pile, below which (perhaps) are the ashes.

In summary, the walk passed through two spectacular gorges, on route to some interesting and remote petroglyphs and the plaques commemorating the historical Snell murder. The elevation of the high ground provided expansive views of the surrounding area. The walked route was almost 11km (including our unintended diversions) and we spent about 4 hours actually walking.





Left: Of interest is this plaque, installed on the south bank of the Balcanoona Creek, about 200m from Balcanoona headquarters. James Snell is of the appropriate age to be one of George Snell's reported 6 children, but this is unconfirmed.

MARTIN CAON – APRIL 2021



Above: - View to the west from the high ground near hill 484m

Water quality parameters and population characteristics for the Flinders Ranges Gudgeon

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Received 30 Oct 2020, Accepted 02 Apr 2021, Published online: 14 Apr 2021

A link to the above recently published article describing the Water and Fish Monitoring work of the Friends may be found on the activities page of our website or accessed with the link below:

<http://www.rayh.id.au/vulkathunha/documents/Royal%20Society%20SA%20Publication.pdf>



Mount McKinlay from Oocaboolina Hut

Trip Leader's Report: Balcanoona visit Friday 16th to Friday 23 April, 2021 – Martin Caon

21 participants were on the trip, including: Isobel Barrett, Trevor Brettig, Martin Caon, Michael Haarsma, Claudia & Archer, Judy Haarsma, Rob Gabb, Judy Harvey, Wayne Hooper & Libby Robertson (in their camper trailer), Lyn & Bill Jeffries (in their Troopie camper), Kirsty Jolly & Campbell, Chris & Greg Kirby, Henry Pecanek, Paul Saxby, Garry Trethewey, Annette Vincent, Ric Williams. We were able to use "house 4" as extra accommodation on this trip.

Balcanoona Re-Vegetation Report

Volunteer and Ranger Engagement

Friends involved in the re-veg program this trip included Kirsty and Campbell, Lynne and Bill, Wayne and Libby, Ric and Trevor, Chris and Greg for the bulk of the work. Paul Saxby spent several days prior to the main group arriving, bringing up and installing the safety frame. We were also joined by Judy and Isobel when not at Weetootla monitoring activities. Joeulla joined the re-veg team for much of the time we were there. Sian was on annual leave but joined us for a day to dig holes with the backhoe for the planting activities.

Activities Undertaken

- Ongoing maintenance and installation of plantings and irrigation in and around the Balcanoona Park Headquarters
- Installation of steel storage frame custom built and installed by Paul Saxby in the Friends' workshop to make storing items much easier
- Collection of seed from the Balcanoona Creek behind the homestead. under our permit with DEW
- Some members undertook a small section of the new walking track to be installed in the near future that starts at Balcanoona and ends at Ngawarta wami or Echo Bend on the Arkaroola Road,

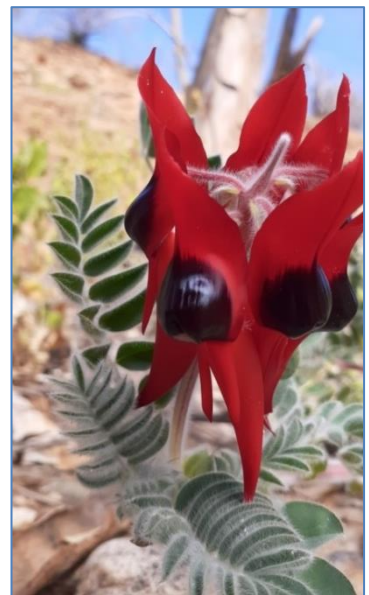
Water and Fish Monitoring Report

Fish and water monitoring occurred on Saturday, Sunday and Monday (17, 18, 19 April). Temperature and oxygen concentration were measured on-site and water samples collected for later analysis. Isobel and Annette were both adept at catching fish. As a consequence, more fish were captured and measured on this trip than on previous occasions. 130 at Weetootla, 390 at Nepouie, and 17 at Yuwanhinya. If this level of successful fish capture continues into future trips, it will be necessary to train another worker to measure fish length, in order to speed the processing. The extensive new growth of bulrushes at Weetootla and Nepouie changed the nature of the pools. At Nepouie, the upstream of the springhead and the "last pool" still contained water and fish. At Yuwanhinya, the pools we had previously identified as the springhead were dry. Consequently the springhead has shifted to our first downstream sampling site. See the Friends' website activities page for the link to our article 'Water quality parameters and population characteristics for the Flinders Ranges Gudgeon', published in the Transactions of the Royal Society of South Australia, April 2021. See also the page for a link to an underwater video of the fish, filmed with the GoPro camera recently bought with our grant.

On Tuesday, a bushwalk from Grindell's hut to the north and back was undertaken (see separate report).



Wednesday we returned to Weetootla Spring to place four IR triggered cameras. These are intended to monitor Yellow Foot Rock Wallaby activity and any other animal activity. Two were placed at the springhead, and two on the gorge slope above the eastern side of the Lovely Pool. They will be retrieved during the Sept 3 to Sept 10, 2021 visit. All four were mounted on star droppers via a bolted on "C" bracket with padlock and fitted with a notice stating the observation study and that the cameras were security coded.



On Thursday we took an exploratory walk east in the Balcanoona creek looking for Iga and Quandong (Uti) but found none of the latter. Very few seed pods were found on the Iga. However, many Iga have flowered during early April, so perhaps will have seed pods for collection during the next visits. We did find a Sturt desert pea in Balcanoona Creek, east of homestead at Latitude: -30.448686 Longitude: 139.306870. We also found *Acacia victoriae* (elegant wattle) with seed pods, *Dodonaea lobulata* (lobed-leafed hop bush) with leaves of serrated edges. We also came across a line of 64 processional caterpillars heading north.

Thursday evening, 15 adults and two children had dinner in the Arkaroola restaurant.

Sturt Desert Pea



The Sturt Desert Pea (*Swainsona formosa*) is South Australia's official floral emblem. It has been wonderful to find some Sturt Desert Peas flowering on recent trips, the result of germination after rain. They used to be abundant in the Flinders in years past but now are only found in a few places. We were delighted to find some near Balcanoona on our last day of the April Friends trip and more might be seen in the trips this year.

The Friends of V-GRNP has a permit issued by the Department for Environment and Water (DEW) to collect seed from the National Park – something that would otherwise not be allowed by the general public. Our permit does not allow for the collection of whole plants, so members of the Balcanoona Revegetation Team have collected seed from local

native plants to propagate tube-stock for the revegetation plantings around the Shearer's Quarters and Park Headquarters. We hope to collect some seed from the Sturt Desert Pea plants discovered when next we visit Balcanoona and attempt to germinate them to add to the revegetation plantings. DEW has a policy regarding revegetation plantings in National Park Reserves that requires plants to be grown from locally collected seed where possible as they have genetic characteristics that are specific to the area – so called 'Local provenance'. Where indigenous plants or seed of the local area cannot be obtained, preference is given to using indigenous plants sourced from the closest nearby source to maintain the genetic integrity of local plant populations.

St John Ambulance CPR Course

Pam Smith, Admin Officer for Friends of Parks recently circulated an email advising of free St John CPR course, here are the details.

St John Ambulance SA has been awarded a grant from Masonic Charities SA & NT to train 6,000 people over three years in lifesaving cardiopulmonary resuscitation (CPR).

Participants will receive:

1 x FREE Nationally Accredited CPR course* delivered by St John Ambulance SA

1 x FREE Personal Leisure First Aid Kit

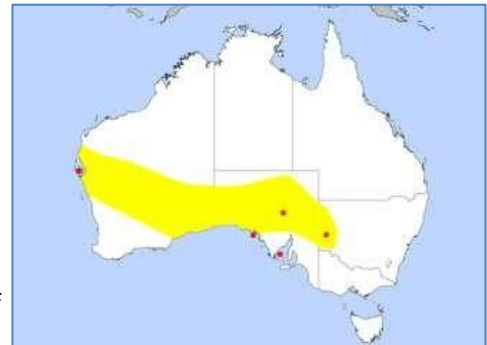
A Statement of Attainment upon successful completion of HLTAID001 Provide cardiopulmonary resuscitation

To find out more, call 1300 78 5646 or email courses@stjohnsa.com.au and quote - **Masonic2020**.

Stick-nest rats and other extinct mammals in the Gammons.

During the April 2021 trip to the Gammons people were interested when I showed them some remains of a stick-nest rat nest, nestled under a crevice in a rock.

The sad story of stick-nest rats (SNR's) exemplifies how many Australian native animals have suffered under European occupation. The two species of SNR's used to live right across arid southern Australia. Now the Greater Stick-nest Rat *Leporillus conditor* only exists in the wild on some small offshore islands that cats and foxes haven't reached, and that are too arid and unattractive for cows, sheep, goats and rabbits, which compete for food. At great cost, and with failures, they've been re-introduced to places like Arid Recovery, inside cat & fox proof fences.



Previous (yellow) and current (red) distribution of Leporillus conditor. L. apicalis had a similar distribution

The Lesser Stick-nest Rat *Leporillus apicalis* is extinct, the last credible sighting in 1933.

In the east of the Gammons, I've found remains of SNR's in Weetootla Gorge and Wooltana Cave with little trouble. At Arkaroola, three out of my 16 vegetation photo-points have SNR remains within 20 metres, and other instances are easy to find wherever rock crevices or caves exist. At Arcoona Creek, the north-west end of the Gammons, different rock yields less caves or crevices, but I've found a couple of collections. At Witchelina, about 130km WNW of Balcanoona, I've found more remains.

Here I'll introduce the notion of taphonomy – the science of how things preserve, or how they degrade. Something falling into a dry cave on the Nullarbor and not being scavenged might mummify, but in a warm rainforest it will disappear quickly.

So the fact that we find SNR remains in caves and crevices does not mean that's the only place they lived – it means that's the place they were preserved.

What constitutes SNR remains? Well, SNR's out in the open used to build tightly interlocking nests of sticks up to a metre high and 3 metres diameter, with tunnels and a nest chamber in the middle. These will have all disappeared due to rain, fires, and being walked on by cows.

SNR's in rocky areas seem to have preferred to use rock shelter, but still dragged sticks in to make a nest. And when they built their nests, they would glue them together by urinating on them, the dried urine solids forming a hard tarry looking substance, called amberat.

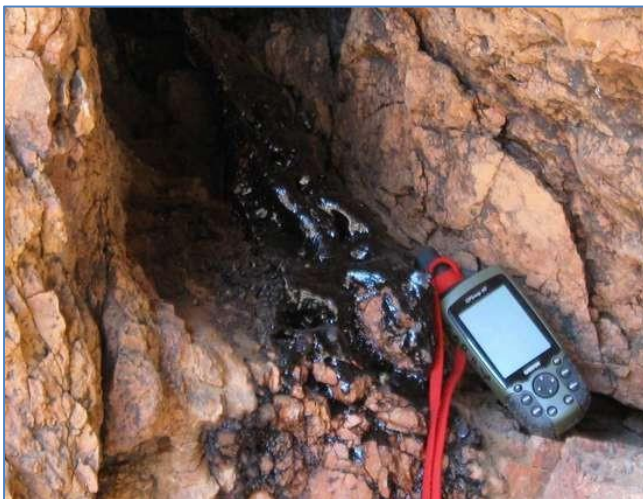


Deposits vary, some being mainly sticks, others pure amberat, seemingly away from a possible nest site.



Amberat and decomposing sticks in a rock crevice.

sitting in a tree, that owl cast will fall on the ground and be eaten or rot fairly fast, but if they're sitting in a dry cave, and the owl cast falls between rocks, so is protected from damage by animal's feet, the bones can last hundreds of years. Not fossils – they're called sub-fossils.



Amberat with no sticks, high up a wall.

In Brachina Gorge, researchers have found nest/amberat piles two metres high and 7,000 years old. These contain information. Pollen, leaves, wind-blown soil, faeces, as well as other small mammals, reptiles and arthropods that used them, can help research of climate and other histories over the 7,000 years.

So we've talked about the SNR remains where they were placed by SNR's. But there's another source and method of placement of SNR remains – owls. Owls can't digest bones and fur. After they've eaten and digested the meat, up to 10km from home, they regurgitate a big pellet of fur and bones called an owl cast. If they're

Other native mammals.

Stick-nest Rats are only an example of what's happened to many other Australian animals and plants. The table below describes the contents of two sub-fossil finds, at Arkaroola and at Witchelina.

What I find astounding is that these finds were not the result of years of research by skilled professionals - they were just little old me sticking my nose in various caves and crevices I came across. If my finds are representative, then these animals were all quite common, and have disappeared either locally or completely since European invasion. Dorothy Tunbridge, in Flinders

Ranges Mammals, makes a case for 30 out of 55 mammal species becoming extinct in the region, including 9 totally extinct, most within 50 years of European invasion.

Common name	Scientific Name	Status	Where found
Lesser Stick-nest Rat	<i>Leporillus apicalis</i>	Extinct 1933	W, A
Greater Stick-nest Rat	<i>Leporillus conditor</i>	Islands	W, A
Spinifex Hopping-mouse or (Dusky Hopping -mouse)	<i>Notomys alexis</i> <i>Notomys fuscus</i>	OK S	W
Long-tailed Hopping-mouse	<i>Notomys longicaudatus</i>	Extinct 1901	W, A
Western Barred Bandicoot	<i>Perameles bouganville</i>	Islands	W
Plains Mouse	<i>Pseudomys australis</i>	OK	W

(or ??)			
Goulds Mouse	<i>Pseudomys gouldii</i>	Extinct 1857	W
(Bolam's Mouse) <u>or</u> (Sandy Inland Mouse)	<i>Pseudomys bolami</i> <i>Pseudomys hermansbergensis</i>	OK OK	W
Long Haired Rat	<i>Rattus villosimus</i>	OK	W, A
(Fat-tailed Dunnart) <u>or</u> (Stripe-faced Dunnart)	<i>Sminthopsis crassicaudata</i> <i>Sminthopsis macoura</i>	OK OK	W
Greater Bilby	<i>Macrotis lagotis</i>	S	A
Western Quoll	<i>Dasyurus geoffroii</i>	S	A

Status: E -extinct, approx. date, **Islands** -remain on a few protected islands and fenced compounds, **S** -smaller range than before, **OK** - doing OK.

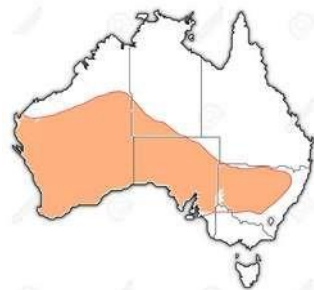
Where found: W - Witchelina, A -Arkaroola

(brackets) – primary identification uncertain, (might be this instead.)

All identification by Graham Medlin, SA Museum.

Below are three examples, just from my two finds.

The Greater Bilby, known as a 'pinkie' for its pink rabbit ears, used to live over 70% of Australia. The footy fields between the Torrens River and Womens & Childrens hospital are still called Pinkie Flat. You couldn't ride your horse there, for fear of it breaking its leg in a pinkie hole. The map shows the current (red) and pre-European (green) distribution of Greater Bilby.



The map at left shows distribution (orange) of the Western Barred Bandicoot before European invasion. The last sightings on the mainland were 1922 and 1929, at the edges of the Nullarbor.



Old newspaper cuttings from Orroroo complain bitterly about all the tiger-cats killing the chooks. The Western Quoll lived over 70% of Australia (light blue). Currently in the south west of WA (dark blue). It has been re-introduced just north of Wilpena Pound, with ongoing cat and fox control.

Garry Trethewey

PARK VISITS 2021

Oocaboolina Refurbishment – June 5 to 11, 2021 and Sept. 8 to 15.

Balcanoona - revegetation - July 20 to 26, 2021 and Sept. 3 to 10.

Weetootla - water & fish monitoring - Sept 3 to 10.

The September visits allow members who attend Balcanoona and an opportunity to work at Oocaboolina – a BBQ lunch for all members will be held at Balcanoona on Thursday Sept. 9th.

BYO Meats – Salads supplied by Friends