

ADELAIDE BUSH WALKERS

# Tandanya



[www.adelaidebushwalkers.org](http://www.adelaidebushwalkers.org)

Volume 45 Number 4 Summer 2015



www.powerhousemuseum.com

## Merry Christmas and a Happy and Safe New Year

### ABW Club information

The club meets at the North Adelaide Community Centre, 176 Tynte Street, North Adelaide on the first Wednesday of each month at 7.30pm (February to November)

### Annual subscription fees

Category	Normal	Student
Prospective Membership	\$60	\$30
Full Membership	\$60	\$30
Associate Membership	\$10	\$10

Family membership is no longer available for new members

### Contact details

Email: [info@adelaidebushwalkers.org](mailto:info@adelaidebushwalkers.org)

Web: [www.adelaidebushwalkers.org](http://www.adelaidebushwalkers.org)

Post PO Box 434, North Adelaide, SA, 5006

### Banking Details

Bank: Bank SA BSB: 105900 Account: 950 866 540 Account name: Adelaide Bushwalkers Inc.

### Membership queries

Contact the Membership Secretary Kate on 0410 660 562

or via email through [info@adelaidebushwalkers.org](mailto:info@adelaidebushwalkers.org)

For privacy reasons, the names and contact details of other office bearers are no longer published in the magazine. Please use the contact details above.

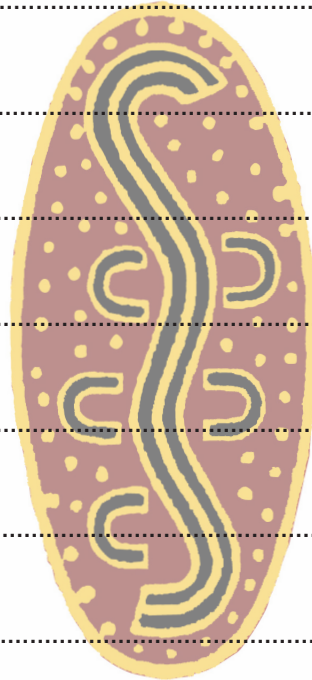
Material in this newsletter may not be copied or reproduced without written permission of Adelaide Bushwalkers Inc. Articles published in this magazine are the work of their authors and do not necessarily reflect the policies and views of Adelaide Bushwalkers Inc.

# Tandanya

Season 2015 Volume 45 Number 4

## Contents

In the Arms of the River Murray Richard Bowey.....	4
Hydration John Norris.....	11
Some Walks in California Trevor Jones.....	14
Mt. Remarkable Walk John Bartlett.....	17
Some Remarkable Facts Bruce marquis.....	18
Jottings John Bartlett.....	19
Warren Bonython Memorial Water Tanks Mark Proctor.....	20
<i>This is Canoeing</i> , new library book Karen Madera.....	21
Demise of Grampians Long Weekend John Bartlett.....	21
The Logbooks on Peaks Project John Bartlett.....	23
Gear Tips: Satellite Phones Bruce Marquis.....	24
Early Editions of ABW's Magazine Roger Kempson.....	28
2016 Bus Trip: Aroona Valley Mark Proctor.....	29
Night Skies Dr Ian Musgrave.....	30



# Adelaide Bushwalkers

*"Takes you places"*

*"A journey is best measured in friends, rather than miles." - Tim Cahill*

[www.adelaidebushwalkers.org](http://www.adelaidebushwalkers.org) • [info@adelaidebushwalkers.org](mailto:info@adelaidebushwalkers.org)

Close off date for next issue: 17th February 2016

© 2015 Adelaide Bushwalkers Inc

Tandanya Summer 2015

# In the Arms of the River Murray



By Richard Bowey

The River Murray is the 15th longest river in the world (2,520 kilometres) and the 3rd longest navigable river – 2,224 kms from the bottom of the Hume Dam to Goolwa - but in fact a kayak or other (very) shallow vessel is capable of starting from Bigarra located between Khancoban in New South Wales and Corryong, Victoria, thereby adding some 200 kms to this figure. While still 100 kilometres from its true source, this part of the “river” is not navigable because it is little more than a stream over rocks.

Having heard on ABC radio a couple of years ago someone suggesting that the Murray is one of the last wild, in the sense of undeveloped, rivers left in the world I was keen to paddle from its source to the sea. In September, 2012, I paddled the 1410 kms from Swan Hill to Goolwa and was keen to complete the journey.

Early in the November just gone, my wife and her sister drove me to Biggara and at noon on the 3rd of that month I dropped my faithful kayak, Tui, into the River Murray and headed off on the second leg of my journey. I had learned from [www.mdba.gov.au/river-data/live-river-data](http://www.mdba.gov.au/river-data/live-river-data) there were sufficient water flows for the journey and that the water was 23 degrees.

At Biggara the Murray is the width of a suburban

street, is about 300 millimetres deep and the first stretch is lined with willows. I had done the section from Biggara to Bringenbrong Bridge before, in October last year on a reconnaissance trip, when there was a great deal of water running in it and it was exhilarating to say the least. Then no paddling was required but rather I had to concentrate on resisting the river wanting to drive my (then) empty Tui into the willows on the bends. On that occasion I averaged 12 kph. What would it be like this time with a fully loaded kayak?

Without the snow melt, the ride down was much more sedate than previously but still great fun. Some paddling was required but not too much. At one point, about 4 kms down, I had to portage Tui because a willow had fallen blocking the whole river. Fortunately I had a trolley (to get me around the Hume Dam and Yarrowonga Weir) but I didn't think it would be required so early. When I finished this section, I rang my wife and told her I had covered the most dubious/dangerous part and she was free to head home. Little did I realise, I was now on my own!

Although there are very good maps from Yarrowonga to Goolwa which show every twist and turn of the river, there are no easily accessible detailed maps of the area above that. Consequently I only had some basic Google maps

of the river. For that reason and because there are no markers above the Hume Dam I had no exact idea of how far I travelled that first afternoon. Given the current, though, I suspect it was about 50 kms. The paddle took me through lush beef grazing country – the animals were frequently in the river itself – surrounded by mountains.

While the land in NSW is privately owned to the water's edge, in Victoria the first 60 metres is Crown Reserve and anyone is free to camp there, a fantastic legacy to the people of Australia from the founding fathers. Despite this, on the first night I camped on the NSW side just north of Towong.

The next morning I set off at about 0800 hrs. The scenery was gobsmackingly beautiful. In fact it was so beautifully that a couple of times I ran into snags on the banks as it was all I could do to take my eyes off the country I was passing through. Little did I realise that a real life adventure was just around the corner. I came to a T section with the water to the left and right of a junction. I stayed in the middle of the river so I could choose which way to go. Mistake. As I approached the junction, Tui suddenly shot forward straight into the pile of debris which had accumulated on the opposite bank of the junction. My efforts to turn to the left came to nought. I was pinned to the bank unable, because of the strength of the water to move forward or backward. As I wondered what I was going to do I felt Tui began to tilt. The water was driving her under the flotsam. A point came when I realised I was going to be flipped. I grabbed a mouthful of air and over we went. I recall having time to think this was not good, snags everywhere, a fully loaded kayak upside down and I could die here and no one would know.

I slipped out of the cockpit and ended up next to my overturned kayak. I had Tui in one hand and my paddle in the other (although it was tied onto the boat – but how much pressure could the strap sustain before it was torn loose?). I eventually worked Tui to the right but, with no bank to beach her on, I managed to climb up on a platform of debris still holding both kayak and paddle and begin the mopping up operations.

I flipped Tui the right way up and managed to partly haul it onto the debris and used one of my



Thrills in the first section



Winding our way through the mountains



Perfect beach



Echuca

water containers to bail out the water. I checked the damage. I had lost a kayak shoe and a seat I kept in the bottom of Tui. My SPOT and my Epirb were also gone. The rest of the day was somewhat sobering as I recalled the morning's misadventure and realised that having lost my SPOT I would have to rely solely on my mobile if I needed help.

There were rapids, of a sort, in the river where the water level suddenly dropped which required me to (instantly) assess the best course and not prevaricate. Despite the fact that they roared ahead of and at me, they were all noise. Just a bit of fun.

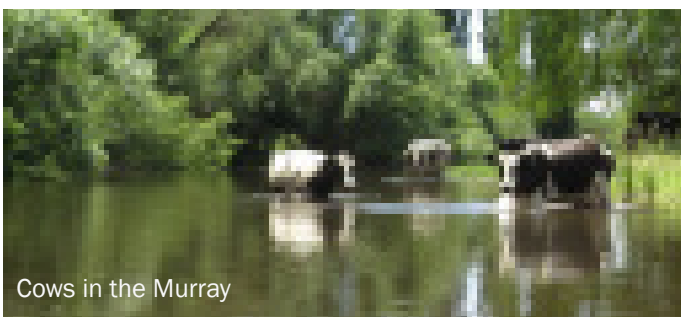
Although physics tells me that water finds its own level, the remarkable part of this exquisitely beautiful part of the Murray was wondering how it found its way through the mountains which surrounded me on all sides. Just when I thought there was nowhere left for the river to go; it would bend around a hill and head down another valley. Then, faced with yet another wall of mountains, it would again change direction to find a valley between two hills. Of course the good thing about paddling is you never get lost ... well almost never!

On the third day the river took us to the beginning of the Hume Dam. On paper I thought I could simply paddle in a straight line but given the dam was only about 60% full, of course this was not the case. I followed the river slowly sinking deeper and deeper into the dead tree lined water course until at last I came to a point where water spilled over the river bank. I could see where the original Murray went by the dead trees standing up and out of the water but I could cut across it to the next bend. This part of the river was both sad (because the river and its red gum sentinels had been trashed) and also very revealing because of the bird life, particularly the pelicans and the swans. Both of these birds are very majestic in the water and more particularly when they take off. The pelicans simply unfold their wings and

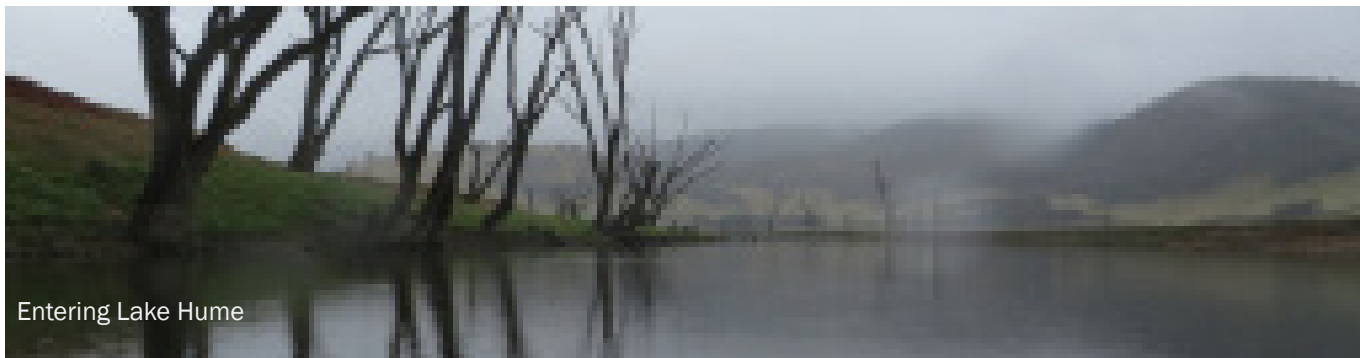
with one flap have their bodies in the air while the swans have to run across the water in a rather clumsy manner until they clear the water when, with exotic white under-wings contrasting against their otherwise black feathers and their necks stretched out ahead of their bodies, they are the most elegant birds. What must the first Europeans, used to white swans, have thought of them?

When paddling on a river one always has a sense of moving because the proximity with the bank reinforces that it is so but in still water, on large expanses of it with no current to assist, that sense of progress is easily lost. So it was on the Hume Dam. I seemed to paddle for hours and get nowhere. It was also on two legs of the Hume that I was embraced by Nature and given a real treat. The dam itself is in excess of 30 kilometres long which means that at a speed of about 5 kph, it will take 6 hours to paddle. I had covered about 75% of this distance, there was not a breath of wind, dark grey clouds accentuated the colours and the starkness of the landscape and occasionally some raindrops punctured the water. I was into a 6 kilometre leg across virtually open water when the rain came, about twenty millimetres in 45 minutes (I learned afterwards)!

Imagine a kayak sitting on grey silk. When the first raindrops hit the water, they create minute black dots in the silk. But when heavy rain hits, each drop creates a small hole surrounded by a cone made up of water droplets propelled into the air by the sheer force and size of the raindrop. The bow wave, the only indication of progress through the water, disappears. Now roll in the mist to obscure everything in every direction leaving a white haze of dancing water droplets on the horizon. Turn on the lightning and thunder. You paddle but nothing changes. You seem not to move. There is nowhere to hide or seek shelter. You paddle solely by maintaining your compass bearing. Every few minutes the sky lights up and some (fortunately long) period later (ten seconds?) a boom crosses the water in surround sound. There are only you, the kayak, the compass, the grey surface of water alive with activity and the rain. This is your world. Nothing else exists. You are not frightened. You are certainly wet but you are not cold. You don't want it to end. It feels like it won't for you don't seem to be moving at all. Time is meaningless.



Cows in the Murray



You think you see a dead tree on your bearing. Slowly it becomes more than a hint. You set it as your new marker. You paddle, seemingly endlessly, towards it. It gets bigger, clearer. You see another tree behind it. The mist lifts. Everything is clear and clean. You are still a kilometre from the bank. But where are you? Nothing looks familiar? How could it? The landscape has been gone for thirty minutes. How does it reconcile with the map in front of you? You have no choice but to trust in your bearing. You paddle on. Now you see the headland. You are where you should be. You have just experienced a unique insight into Nature. You are on a natural high.

In fact I slept on the shores of the lake that night, four kilometres short of the dam wall. Next morning, I portaged Tui to the river beyond and re-commenced the paddle. Albury was 28 kms away, about three hours. It was a place to resupply.

Below Albury we were again on the Murray when we saw the first of the blue and white signs indicating the number of kilometres to the Murray Mouth. It read 2224. We knew that Swan Hill was at the 1410 mark so it was only 814 kilometres to go. All was well in my world. We had survived the unknown.

We had the river to ourselves again. Technically, I should stay to the right hand side of the river but, apart from a few campers on the Victorian side of the river, there is no one around. I call it "my river" when I can paddle on whichever side I like, when I can wander from one side to the other because there are no towns or people or boats. It is a wild river and it is "my river"!

The 240 kms section below the Hume was significantly different. Gone were the mountains and even the hills. The river had widened out a little but was still pretty compact. On one stretch of

particularly meandering river, many red gums had fallen into the water making it virtually impossible for any but a small craft to pass. At other places, and this was common all the way down to Swan Hill, various strategies had been employed to try and prevent or mitigate the erosion of the river banks. In some places granite rocks had been dumped inside the bends, at others wooden piles had been driven into the bottom of banks to break the flow of the destructive water, at others wooden posts had been driven into the ground and backfilled with sawn logs. I couldn't help but think that at the end of the day the water would do as it wants to.

There were some beautiful beaches on the way through and the Victorian riverbank, in particular, was often dotted with campers in tents, caravans and camping trailers. And what a holiday they would have. Watching the river flow, as my friend Bob Dylan says.

Further down there were also areas of forests of red gum, that tree so intrinsic to the Murray.

The depth of the banks of the Murray ranged from 300 millimetres to 4 metres. When the banks were high, "beaches" were my best friends. These were protrusions into the river, normally behind a bend where the current was very slow and where red sand sediment had been deposited over the millennia making them firm underfoot. Many of these had red gums, both old and new, providing shade and were as good as a beach on the coast, perfect places to stop for a break, for lunch or just to strip off and jump into the water to cool off. Where there were no beaches I had to land on mud where my feet sank into the red mud, sometimes with stinking grey soil underneath. Where this occurred mosquitoes awaited me on shore. Not good. Generally speaking, though, there were few flies or mosquitoes and certainly

not when I was on the river paddling. This made a good reason to keep to the water in those situations.

The river took me into the particularly lush beginning of the 20 km long Lake Mulwala where the tourist settlement of Bundalong stood. While I tried to follow the Murray using the live trees as my markers, I eventually lost the trail. Unable to see the shores of the dam because of the heavy stands of live and then dead trees, I again had to use a compass bearing to find my way to the weir. Again the water was like silk though this time it was light blue through which dead red gums protruded, both in the original river and the surrounding expanses of water.

The next morning as I portaged around the weir, I learned that each year there was a Victorian River Marathon, a 404 km paddle which takes 5 days which was due to leave soon. I had been doing somewhere between 50 and 70 kms a day but calculated that if I did 50 kms a day, I would finish my paddle on a Saturday and my family could pick me on a weekend. Any faster than that and I would be stranded in Swan Hill. I wondered if I was going to get run over by these marathon paddlers.

Below the weir, I set off on a narrower river which took me past some magnificent beaches, many of which on the Victorian side were packed with campers. I passed through the lovely town of Tocumwal before entering the 100 km long red gum forests of Millewa and Barmah on the NSW side and Moira on the Victorian side. There was some amazingly beautiful country here with river banks only 300 millimetres high in places. In times of flood, water spills over the banks and floods the surrounding lowlands supplying water to the forests. It was in here that I hit the Narrows, a place where the river shrinks down to a twenty metre width and where the water fairly races along. The forests here were very lush and the bird life phenomenal.

In the mornings, I was woken by an extremely raucous dawn chorus about 5.30 am, an hour before sunrise. I can report that generally the kookaburras were the first birds to announce the coming morning followed by either sulphur crested cockatoos, corellas and/or magpies. Once these were done, it was open slather with birds of every

type having their say. I had heard a program on birds that reported that birds have different calls and pitches so they can all hear each other at the same time, that is to say they fill the entire sound spectrum from low frequency to high. How true it was. The decibel rating of these choruses was astounding. Nothing quiet about it.

And speaking of birds, early on I witnessed a murder. I didn't see it but I certainly heard it, a murder of crows (ravens, actually). There were about 100 of them, it was like Federal Parliament at Question Time with each one trying to speak/sing/squawk at once and did it sound murderous. My son later told me it was probably caused by a dead crow as they do gather over a fallen comrade. <http://news.nationalgeographic.com/2015/10/151003-animals-science-crows-birds-culture-brains/>.

I pushed on to the town of Barmah. While most of the days were great weather, 25 to 30 degrees, on this day it was pretty warm so I hung around until late afternoon before setting out again to put some space between me and the town. I had found on my last trip that the last place I wanted to be at night was in a settlement.

Depending on the weather and how far I was paddling, I would set up my tent late afternoon, gather firewood, write up my diary, have a wash and cook dinner often to the sound of the birds as they signed off for the night. They were often as noisy at this time of day as they had been in the mornings. Once I had finished my meal, I would retire to my tent just before dark, read for a bit or maybe listen to a few songs on my iPod. When I woke up with my light still on or my earphones still in, I would turn it off and drift back to sleep. Although I woke, often caused in the first two weeks by tingling fingers as a result of gripping the paddle for hours on end, I fell asleep.

It was Sunday as I approached Echuca and I came across a paraplegic and his party who was doing a reconnaissance for a trip he planned kayaking from the source of the Murray to the sea. His kayak was fitted with two outriggers and he had a support team consisting of a mate, an able bodied fellow kayaker, and another driving a powerboat towing a tinnie loaded with his wheelchair and supplies. The other kayaker explained that when





to imagine that I was seeing the Murray River as it had existed millennia ago, virtually untouched. One thing was obvious, however, and that was that most of the trees were the same relatively young age. Was this because the forests were logged or was it a reminder that when the paddle steamers were working the river, they burnt red gum often towing barges loaded with their fuel? Red gums were felled up and down the river for kilometres inland to feed the hungry steam driven machines.

he actually did the trip, different mates would accompany him on different sections. Now that's gutsy.

Echuca was once the busiest inland port in Australia as paddle steamers plied the river taking supplies to farms, and returning with farming produce to the Echuca railhead to Melbourne. For those who haven't been to this tourist town, the docks have been restored where working paddle steamers are moored and along the banks. I had kayaked this area before but that did not diminish the impact of rounding the bend to see the port of Echuca and its vessels. It was not hard to imagine I was in the middle of the nineteenth century when the town was in its heyday.

I re-supplied and headed out but not before learning that the previous day the river south of Echuca had been closed for the 2015 Barrie Beehag Ski Race during which boats and skiers reach speeds of up to 180 kph. While I thankfully missed that, all the snags from Deep Creek Marina to the Torrumbarry Weir, the first lock on the Murray, were unnaturally decorated with bright orange flags, plastic bottles and containers. In this section, the river was very wide, and slow, with beautiful large areas of flood plains and lagoons particularly near the weir.

After the Torrumbarry Weir the orange flags ended as I entered a narrower and fairly remote part of the river which essentially ran through 100 kms of red gum forests on both sides of the river. These are registered RAMSAR sites, wetland areas of international significance. These forests, the Perriocoota and Koondrook on the NSW side and the Gunbower on the Victorian side, were magnificent and, because of their remoteness meant I saw only a handful of people in two days of paddling. On each stretch and bend it was easy

The day I hit Barham was 38 degrees and I spent several hours in the town just wandering around until the day cooled when, at 5.00pm, I jumped in Tui and paddled for a couple of hours before making camp. My wife told me by phone that the next day temperatures of 42 had been forecast with winds so that morning I was in the river at 6.30 am and off of it at noon having paddled 42 kms. I found a rare (for that area) beach and set up where I slept, read and stripped off every hour or so to sit in the water to cool down. It was a magic day on a perfect beach. Sixty one kms from Swan Hill, my destination, and having again received advice from my wife that it was going to reach 38 degrees with a building westerly wind which would turn south-westerly the following day I was in Tui at 6.10 am. I resolved to paddle 40 kms and then, depending on conditions and camping opportunities, decide whether to press on to Swan Hill.

As the kilometres passed under me and the red gums on either side of the creek gradually thinned until there was virtually only one row of trees on either side, I decided after completing my 40 kms target for the day that I would push on to Swan Hill. I arrived at 1.15 pm, checked into a riverside caravan park, had a shower and walked into town to get some "treats" from the supermarket. When I emerged from the shops, it was blowing a gale, picking up dust from wherever it could find it. Hughie had held off the wind for this weary traveller.

Tui and I had covered the approximately 1000 kms in 17 days at an average rate of 58 kms a day. I was weary but healthy, feeling especially privileged and lucky to live in a country where I could kayak 1000 kms on a wild river in a relatively safe environment. I saw the mighty Murray with its many faces. An extraordinary and unique experience for anyone with a few weeks to spare, some bush skills and a kayak.

Making **YOUR** dreams a reality

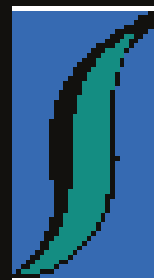


Adelaide  
Bushwalkers

**ABW MEMBERS  
Receive 10% Discount\***

**\*In Store Only**

Excludes CPs, Vehicles, FLPs,  
Recalling Products & Main Items



**Scout  
Outdoor  
Centre**

**10000 HILLS ROAD, MOUNT MERRIBEE, SA 5035**

# HYDRATION

By John Norris mba



John is the Vice President of ABW

**D**isclosure: I am a direct retailer of Enagic© water ionizers that produce Kangen™ ionized water and as such I am unashamedly biased towards the benefits and consumption of Kangen™ water. I am not a medical practitioner nor a medical research doctor. Having said that, my chosen health promotion career and an MBA has enabled me to research, study, and critically analyse a plethora of literature and documentation on the subject.

That cumulated knowledge has been used to transform myself from an obese dysfunctional 130 odd kilograms person to 70 odd kilogram hiker and marathon runner. This statement is not meant to impress you but to impress upon you, the importance of true health and the responsibility you have as an individual to take full responsibility of your own health and wellbeing.

What's Hydration?: This article has come from

[www.hydratation.net.au/page/shop/info\\_page/a/infopage\\_id/e/34](http://www.hydratation.net.au/page/shop/info_page/a/infopage_id/e/34),

neatly sums up the question.

“Hydration is a term used to describe your body’s ability to manage water. This means water management at every level down to the individual cells. Correct hydration is dependant on cellular uptake of water, not simply whole body intake of water.

If you are well hydrated your body will take the water you drink (and eat as part of your food) and distribute it correctly to all the cells in your body that need it, taking with

the water all the essential nutrients of those cells. The well hydrated body is also able to use this cellular water to wash out waste products and toxins from cells and deliver them to the organs of excretion. In a poorly hydrated body these processes will be sluggish or absent and nutrients will be unavailable to the cells, and waste products will build up to toxic levels. Hydration is one of the most fundamental processes in a healthy body, yet it has received very little attention by the biomedical research community and by the population at large.”

*Natural Health Supplement Guide - What is Hydration*, By Jaroslav Boublik B.Sc (Hons), Ph.D. MRA-Cl, C.Chem., Scientific Director AquaConneXions Pty. Ltd.

That pretty well sums up the term hydration in regards to human health. So why is water so important? What’s the Big Deal?

We now know that hydration refers to the body’s effective use of water we also know from empirical studies, the human body is made up of between 70% and 90% water. Every action, metabolic activity, electrical transmission, physical activity within the human body is regulated by or conducted in the presence of water.

Studies from sports medical institutions report that a 1% reduction in hydration causes a 5% drop in performance. That’s pretty staggering when, as Dr Boublik suggests, very little research or medical attention has been given to the importance of water and hydration in the area of human health. Not just the immediate and obvious effects of dehydration, but the long term far reaching effects

of dehydration and chronic disease.

All, all disease occurs in the environment of dehydration which is acidic, oxygen depleted tissue. Refer 1931 Noble Prize winner, Dr Otto Warburg.

Now here is another quote from the good Dr Boublik.

“Water has several roles in the human body. It gives structure and form to cells and tissues. It provides the medium for movement of heat from the core of the body to the surface. It is the matrix within the body which creates the biochemical reactions that together make up cellular metabolism. Water is the transport mechanism for all internal movements of all nutrients and biomolecules, exchange of nutrients between the environment and cells and clearance of waste products.

Water is the most important nutrient that the body uses. It is correctly thought of as a nutrient as it is a limiting factor in many, if not all, biochemical processes. The correct metabolism of all other nutrients depends on the availability of sufficient water for correct biochemistry to occur. The macronutrients (nutrients required in relatively large amounts on a daily basis) protein, carbohydrate and fat all require water for their correct assimilation and utilisation. All micronutrients (nutrients required in smaller amounts or less frequently) including vitamins and minerals require water for correct uptake and distribution.”

The immediate effects of massive dehydration are obvious. The symptoms cover things like weakness, vagueness, disorientation, poor vision, discoordination, pale and clammy skin, dizziness, fainting etc. Nearly all the symptoms you observe from any major ailment. The reason why? Well in severe cases, the body starts to shut down non-essential organs to the extent that those organs may become permanently damaged. If immediate rest and rehydration is not forthcoming death can quite quickly follow. That normally does not occur as the patient will usually fall unconscious as the body goes into life preserving shutdown.

The importance of water can be simply demonstrated. A person can survive without air for a few minutes, without water for a couple of days, and without food for 40 plus days. So the hierarchy of importance is; air, water and way behind, food. Its way up there with air! During summer hydration becomes even more critical because we lose addition water as our

bodies need to dissipate heat in the warmer weather. Water is lost through the normal elimination processes, through the skin, perspiration, and via our breath. The hotter the ambient temperature and the more strenuous exercise being under taken, the higher the rate of water loss necessarily becomes. Quite simply, to stave off dehydration and its potential fatal effects we must replace that water loss consistently throughout the day.

Research indicates that, when reasonably sedentary, we should consume approximately 1 litre of water for every 20 kilograms of body weight. That is, an 80 kilogram individual should consume approximately four litres of water per day. That's a bit more than the 8 glasses a day isn't it? Further reading, “Your Body's Many Cries for Water” Dr Batmangheldj.

If you are undertaking strenuous exercise on a hot day, obviously to maintain equilibrium, you would need to drink much more. Maybe as much as twice the recommended amount of two litres for every 20 kilograms of body weight. To minimise the loss of hydration it is bleedingly obvious that one should slow down, keep cool and minimise strenuous activities. As bushwalkers, there are many things we can do to delay the onset of dehydration. Simply slow down, wear appropriate clothing, utilise shade wherever possible, walk shorter distances, rest up during the high heat of the day etc. and consume adequate amounts of good drinking water. If you exert yourself over a just a few hours on a hot day without drinking water you are likely to suffer the symptoms of heat stroke etc. If you do not heed those symptoms and warnings you may suffer irreversible organ damage as parts of your body begin to shut down to preserve life itself. If you still ignore those symptoms and push on without rest and rehydration you will eventually become severely incapacitated, suffer permanent damage and may even die.

According to studies done by the Russians way back in the early 1900's, fresh melt glacial water obtained from steams high in the mountains is the best water available, it is enriched with the correct ratios of the prerequisite minerals, clean of any other contaminants or toxins, it is alkaline and micro clustered. The three major benefits of this

water are that it is a very powerful antioxidant, it is highly hydrating and is alkaline.

Unfortunately, this is not much good to us unless we live high in the mountains just below a glacier, as the properties diminish relatively quickly mostly due to man's intervention. The Japanese have been producing Kangen™ waters, from standard tap water using a water ioniser classified as medical devices that mimics fresh melt glacial waters.

The second best water available is fresh mountain stream water that has not been interfered with throughout its journey from its source. While we are walking there really are very few water sources that have not been influenced to some degree by our industrial world. Having said that, most of the water from national parks etc is potable. It's up to the individual whether they wish to sterilise the collected water in some way using purifying tablets, powders or devices such as SteriPENS™ for example.

Good old municipal tap water is reasonable. However, it is oxidising and macro clustered meaning that although it is considered safe to drink, in the long term it's not very healthy. Filtered municipal water using devices such as the good old Pura Tap™ is barely acceptable and a few degrees better than plain tap water.

Bottled spring water is the fourth best alternative. Its veracity is called into question due to the length of time it's been stored, the plastic containers in which it is stored and whether it really is spring water in the first place.

Most, if not all other beverages offer little in hydration benefits as it often requires the body to consume more water to safely process the drink than the amount of water that it contains in the first place.

One of the worst waters to consume is reverse osmosis water. This water is close to distilled water, pure H<sub>2</sub>O, which is unnatural and is classified in health terms as a chemical. H<sub>2</sub>O is a solvent and will leach minerals from the body. Extremely unhealthy! Beware as some bottled waters are reverse osmosis waters.

Obviously, if you need water in an emergency or over a short period of time all of the above (Maybe

with the exception of soft drinks and the like.) will do in a pinch. However, the long term effects of drinking poor liquids is unquestionable.

As bushwalkers you know the basics of collecting water, identifying its source, assessing suitability, treating it as necessary etc. Whole books are written on how to obtain water in the bush so we won't go into that topic here. What I am here to reiterate to you, is that you must drink sufficient good quality water. As previously stated, 1% dehydration equates to a 5% drop in performance. Subsequent 1% drops in hydration are not linear. It is cumulative and logarithmic.

Let's assume a person starts a bush walk healthy, reasonably hydrated and weighs 70 kilos. They are 75% water. That is, they are comprised of 52.5 litres of water and 7.5 kilos of other stuff. (Medical terminology) They expel 1.5 litres an hour through urination, faces, perspiration, breath and general physical activity. They are aware of hydration and drink half a litre an hour. Over eight hours they have expelled 12 litres of water and replaced 4 litres. There is a deficit of 8 litres or 11.48% drop in hydration. Multiply that by the factor of 5 and you can see their performance must diminish by at least 57%. That is all performance, physical and cognitive. And we wonder why people can't make seemingly rash decisions at the end of the day? We need adequate rest, food and hydration.

The best solution is to start well hydrated, really well hydrated, and consume plenty of good water along the way. There are plenty of bushes and trees out there!

Water is the best defence against disease of every kind. Sixty percent or more of all chronic disease would be significantly reduced if people would simply keep themselves properly hydrated. Mr Bob McCauley author and teacher, 20Sep2006. This has been a very short synopsis on the necessity and effects of hydration. If you wish further information feel free to contact the author. Keep healthy, be happy and have a fabulous festive season. See you on the trails.

# Some walks in California, USA.

By Trevor Jones



Left: Pacific Crest Trail through California



Mt Whitney

[www.wildbackpacker.com](http://www.wildbackpacker.com)

The Pacific Crest National Scenic Trail stretches 2,650 miles from Mexico to Canada along the mountainous crest of the Cascades and the Sierra Nevada and through the Mojave Desert. In California the 211-mile (340km) John Muir Trail is a world-famous trail stretching from Yosemite Valley to Mount Whitney, the highest point in the contiguous United States.

The primary hiking season is usually from July through September, though snow may linger on the higher passes well into August following heavy snow years. I had 8 days from 17-25 Sept 2015 in which to do some walking in California. I did day walks at the 2 ends of the John Muir Trail. Most commonly people walk the whole trail in about 1 month, starting from Yosemite national park and

ending at Mt Whitney in Inyo Nat Forest. Permits are required for walking the trail; with a maximum of 45 given per day. If walking overnight it is required that you carry a 'bear canister' to hold all your food (including items that a bear may consider food – like toothpaste, soap, lip balm etc); the canister is meant to be left at least 30m from your tent at night.

Mt Whitney is the tallest Mt on the mainland US, at 4420m. As well as part of a longer walk it can be walked in a very long day walk. It is necessary to get a permit, and the standard ones sell out within an hour of being released 6 or so months before the summer season. A limited number of permits are drawn in a lottery each day – the day before walking. I had planned on trying for this, but while over in the US I was fortunate to pick up a day permit from a cancellation.

The walking in the morning was beautiful. The temperature was cool and the scenery spectacular. For the first half of the walk there were regular spots to get water, but it is advised to treat the water before drinking. At the last water spot I took about 3L with me, for the 5-6hr return.

Walking up the last 3km I really struggled. The altitude was getting to me, feeling dizzy and growing headache. It took me over 2hrs to do those 3km. I doubt I would have made it without my (recently acquired) walking poles. Except for a couple of people doing the John Muir trail I was the last one up. The temperature was cool but still comfortable with shirt and shorts - maybe 14C. It took me 8 ¾ hrs to get up, arriving at 2:30pm for a late lunch. Fortunately I recovered from exhaustion to feeling ok over the 35 min break.

When I started back it felt wonderful to be walking downhill. On the way down clouds rolled in and the thunder started, followed by light hail, and a sudden temperature drop to, I think, just above 0°C. With jacket, beanie and gloves quickly on I was just warm enough – as long as I kept up a brisk pace!

I became more fatigued as the day drew on. As ast light approached I had about 3 hrs to go. It was a struggle. I found that stopping for a 2-3 min break did not help at all. And whenever I stopped my body just wanted to coil up and sleep. I had to force myself to eat a museli bar at 7pm – with no appetite at all. I discovered a new level of exhaustion, and was very relieved to get back to the carpark.

I arrived 9:35pm, making it just under 16hrs of hard walking.

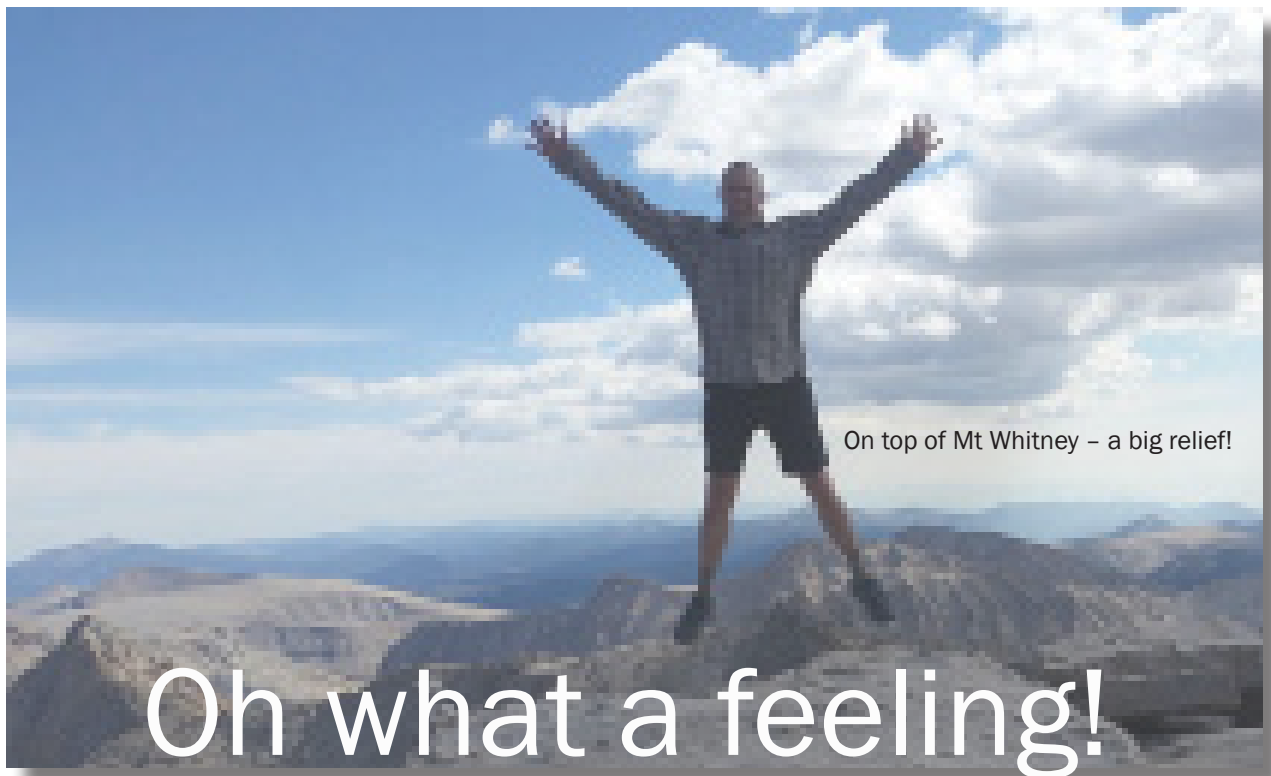
*It is a pretty steady climb up Mt Whitney, on a well-made track, with about a 100m drop down around the back before heading up again. So pretty close to 2km of 'up' on the walk.*



Up through the last of the trees



It is a pretty barren landscape once above the trees



On top of Mt Whitney - a big relief!

Oh what a feeling!

### Club PLBs for Sale

Here is a great opportunity for you to own a PLB for your own use.

The Club bought two Personal Locator Beacons (PLB) in 2008 for members to use on walks in case of distress. These are GME MT410G models which incorporate a GPS and simultaneous 406 Mhz and 121.5 Mhz signals which can be received by satellites and rescue aircraft respectively. They are water proof and ruggedized to withstand tough bushwalking conditions.

The nominal battery life of each PLB expired in October 2015 so the club has bought new PLBs for club use. Since neither of the old PLBs has ever been activated they are both still fully working and their battery will probably work for several more years to come. Each PLB has a test function which can verify that they are indeed fully functional. These PLBs are still the current model.

The PLBs are still registered with the club and should either be activated for an emergency, a number of club officials would be notified by the Australia Maritime Safety Authority which is the organisation that monitors PLB distress calls. So if you were to buy one you could register it yourself or leave its registration with ABW so that club members could get in contact with you or your emergency contact in time of need.



The PLB unit and manual



PLB registration

The PLBs are offered for sale to members at \$50 each (or best offer) with a full money back guarantee if the battery expires before October 2016. That is at least one year's full operation for less than the cost of hiring a PLB for a weekend.

Please note that the current battery performance can be proved. Full operating instructions are included.

If anyone is interested in owning their own PLB, please contact the Gear Hire Manager or send an email to the club.



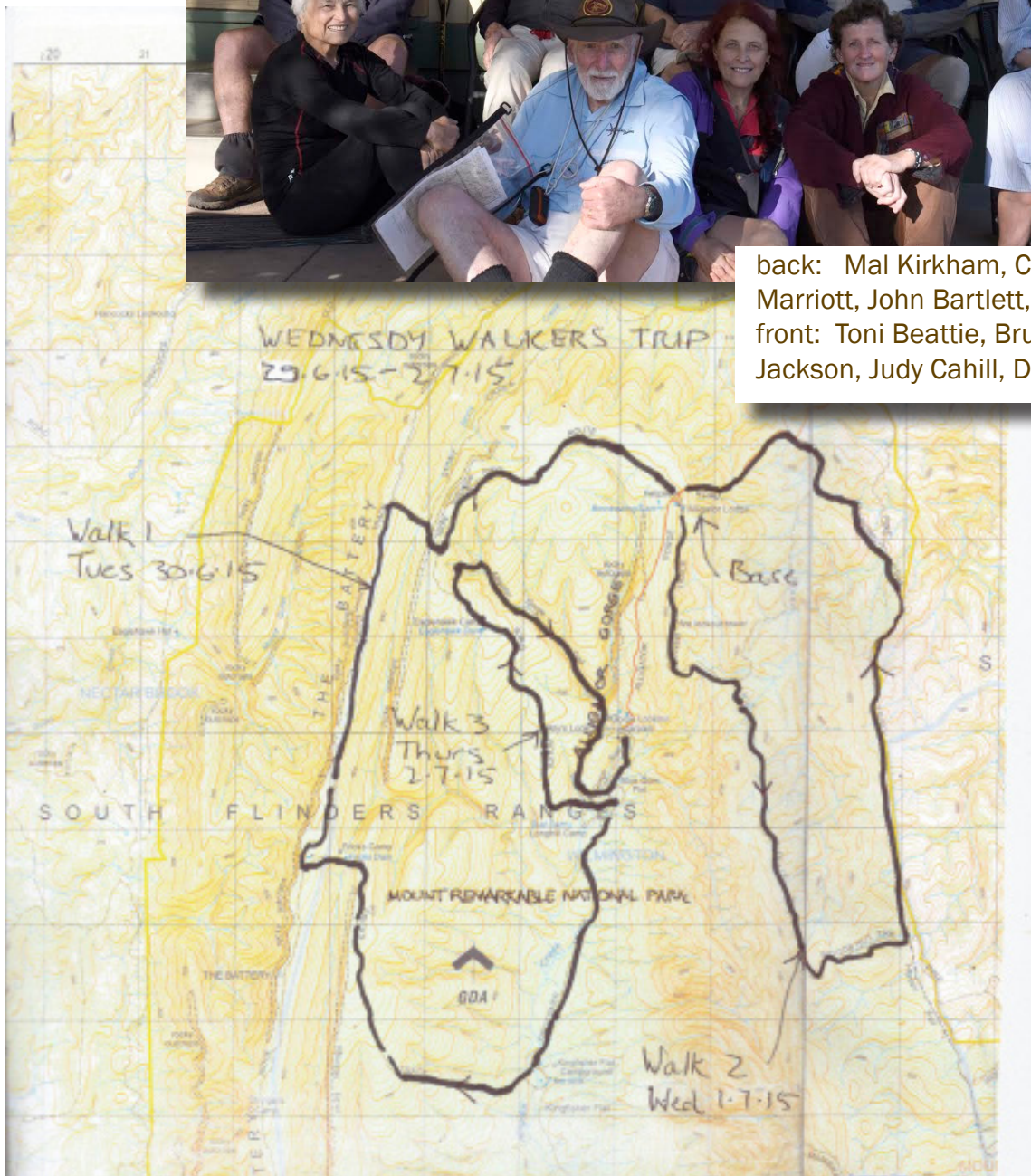
# Mt Remarkable Walk

By John Bartlett

From 29 June - 3 July this year, a very successful trip to the park was organised by Bruce Marriott, with ten going. Using Alligator Lodge as a base, there were three days walking in excellent Winter weather, covering approximately 45km. Walks took the group to The Battery, South to walk a stretch of the Hey-sen Trail, Alligator Gorge and Mt Maria near Willmington.



back: Mal Kirkham, Chris Steers, Bonnie Marriott, John Bartlett, Helen Evans  
front: Toni Beattie, BruceMarriott Melanie Jackson, Judy Cahill, David Evans



# Some Remarkable Facts

By Bruce Marquis

*A "Remarkable" Pound*



The Alligator Syncline is a pound structure featuring Alligator Gorge. It is clearly obvious in the photo and the Google Earth image, right

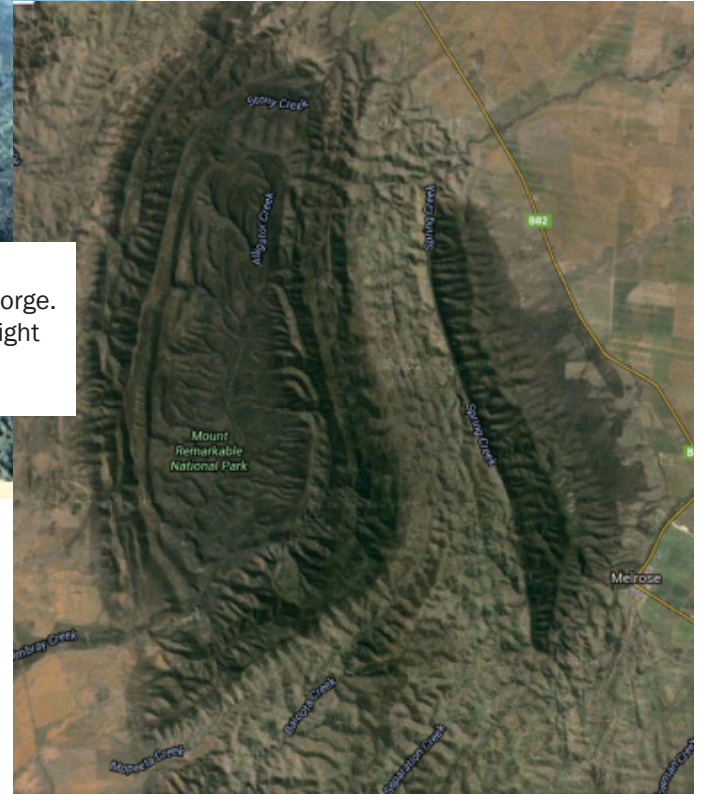
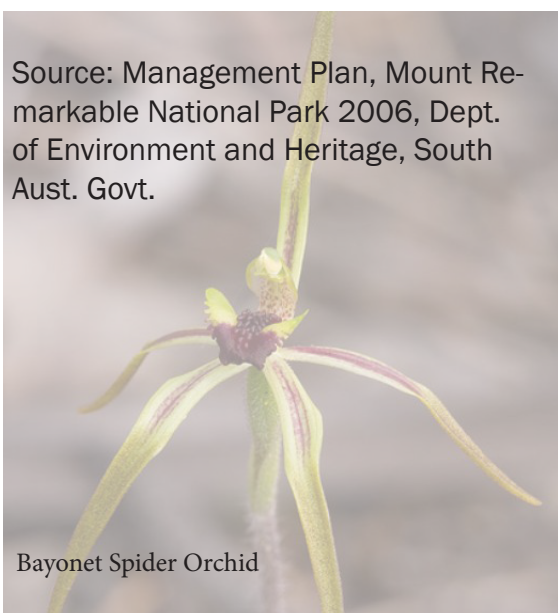


Image: Google Maps

*Mount Remarkable National Park*

- Mount Remarkable National Park was proclaimed in 1972 under the National Parks and Wildlife Act 1972 to conserve natural features and wildlife considered to be of national significance.
- The land comprising Mount Remarkable National Park forms part of the 'Country' of the Nukunu people (Tindale 1974), who referred to Mount Remarkable as Wangyarra, "arra" meaning running water. For Nukunu people, land and waters have many interconnected complex meanings and values.
- The geomorphology of Mount Remarkable National Park comprises inclined mountain slopes of folded, ancient quartzite. Mount Remarkable Range and the Alligator Syncline dominate the reserve. The Mount Remarkable Range runs north-west and is composed of steeply-dipping, 800 million year old sandstone which forms a massive hogback ridge.
- Mount Remarkable National Park conserves vegetation associations and individual plant species of high conservation value. There are 219 plant species of conservation significance recorded, including six species recognised at a national level under the Environment Protection and Biodiversity Conservation Act 1999, 42 species recognised at a State level under the National Parks and Wildlife Act 1972.
- In particular, Mount Remarkable National Park is notable for conserving several orchids listed under the Environment Protection and Biodiversity Conservation Act 1999. The Bayonet Spider-orchid (*Caladenia gladiolata*) and Flinders Ranges White Caladenia (*C. xantholeuca*) are confined to only a few localities in the Mount Lofty and Southern Flinders Ranges, both are nationally endangered.
- 58 native reptile species have been recorded for the park. This compares with 86 reptile species recorded for the whole of the Flinders Ranges region (Hutchinson and Tyler, 1996). Species of conservation significance include Carpet Python (*Morelia spilota*), considered vulnerable at a state level because of its wide but sparsely scattered distribution, and Tree Goanna (*Varanus varius*) and Common Bandy-bandy (*Vermicella annulata*), both listed at rare at a state level.

- In addition, the Tiger Snake (*Notechis ater*) and the Flinders Ranges Worm-lizard (*Apracia pseudopulchella*) are listed as vulnerable under the Environment Protection and Biodiversity Conservation Act 1999. The Tiger Snake is confined to high rainfall riparian habitats in the Southern Flinders Ranges and is threatened by loss of habitat through clearance, fire and grazing.
- The Euro (*Macropus robustus*) is the most abundant species of kangaroo in the reserve, occurring in all habitats. The Western Grey Kangaroo (*Macropus fuliginosus*) is seen throughout the reserve and the Red Kangaroo (*Macropus rufus*) is occasionally seen on the plains and western foothills of the Mambray Creek section of the reserve.
- The Short-beaked Echidna (*Tachyglossus aculeatus*) and Narrow-nosed Planigale (*Planigale tenuirostris*) have also been recorded in the reserve, however the last recorded sighting of the Narrow-nosed Planigale in the reserve was over 20 years ago. The Narrow-nosed Planigale is considered rare in the Flinders Ranges and its occurrence in Mount Remarkable National Park represents its most southerly distribution in South Australia.
- The Yellow-footed Rock-wallaby (*Petrogale xanthopus*) is the park's most significant mammal, listed as vulnerable under the National Parks and Wildlife Act 1972.



Source: Management Plan, Mount Remarkable National Park 2006, Dept. of Environment and Heritage, South Aust. Govt.

Bayonet Spider Orchid

## Jottings from John Bartlett



### Wednesday Walks

There are approximately 45 Club members on the Wednesday Walkers list, and average attendance on walks is about 18.

Their programme, prepared on a six month basis, is on the Club website, as well as a printed copy being available from me.

It must be remembered that any Club member can attend a Wednesday walk, or the multi-day trips that are arranged two or three times a year.



### University of the Third Age-Flinders

This group has an office in Flinders University and meets at Active Elders Association hall at Ascot Park. It is interesting that there are 10 members of ABW that are also members of U3A Flinders. Of those 10, Sheila Dickinson is Treasurer, and I am President. If any other ABW members would be interested in finding out more about U3A Flinders, have a talk with Sheila or me.

### Log Book Container

There is a spare metal log book container in the Club storage.

Any leader planning a walk to a Flinders Ranges peak, not listed in my article referred to above as having a log book and container is encouraged to install this spare container and a new log book on such a peak.

# Warren Bonython Memorial Water Tanks

By Mark Proctor

In his will, the late Warren Bonython who had been the patron of the club for more than 20 years left the sum of \$10,000 to the club with no constraints on what it was to be spent on.

The ABW Committee decided in 2013 to dedicate the sum to the building of water tanks which would enable ABW groups to benefit from more reliable water resources in appropriate walking areas. The sum to be spent is not limited to \$10,000 but it is not expected to be significantly more. Upon advice from the Friends of the Heysen Trail it was decided that the target for ABW water tanks should be four tanks and they were not to be on the Heysen Trail. It was preferable that they be located on 'private' property in an area well away from car access.

To implement this plan a Sub Committee has been formed with our patron, Duncan Chessell as Chairman and six other members. The others are: John Bartlett, Dean Johnson, Bob Geary, Mal Kirkham, Mike Round and myself. These members bring a wealth of design and construction expertise together to be able to implement this important contribution to broadening the walking opportunities for members.

We are currently in the planning phase of this project with a Mike Round devising a template for gathering



This wooden structure water tank was installed by the Friends of the Heysen Trail at Eyre Depot.

members' suggestion of where we might locate water tanks. Each suggestion will be evaluated in January and a short list created for closer investigation including visiting the site, talking to the relevant land owner and gathering information from the Friends of the Heysen Trail who have already installed 10 similar tanks.

We have not yet decided whether to build the tank structure out of wood or metal. Metal would be more resistant to bushfires but it could be more than twice the cost. Using cypress pine would make a wooden structure at least resistant to termites. There is also the question of using plastic tanks or metal tanks for the same considerations.

Nearly two decades ago, the club reconstructed the bore pump at Pigeon Bore near Aroona Valley which has given reliable water (even if a bit brackish) to countless numbers of walkers.

The new water tanks will be constructed and installed during the coming walking season. So make sure to get your suggestions in for locations. It is best to nominate places which are on leased or freehold land (to avoid unnecessary regulation by government bodies) near interesting walking places which do not have reliable water sources and are not on the Heysen Trail (because the Friends are already looking after that). When the water tanks location form is available in the next week or so, it will be emailed to members who already get ABW emails and will also be available on the ABW website. Help your club help you.

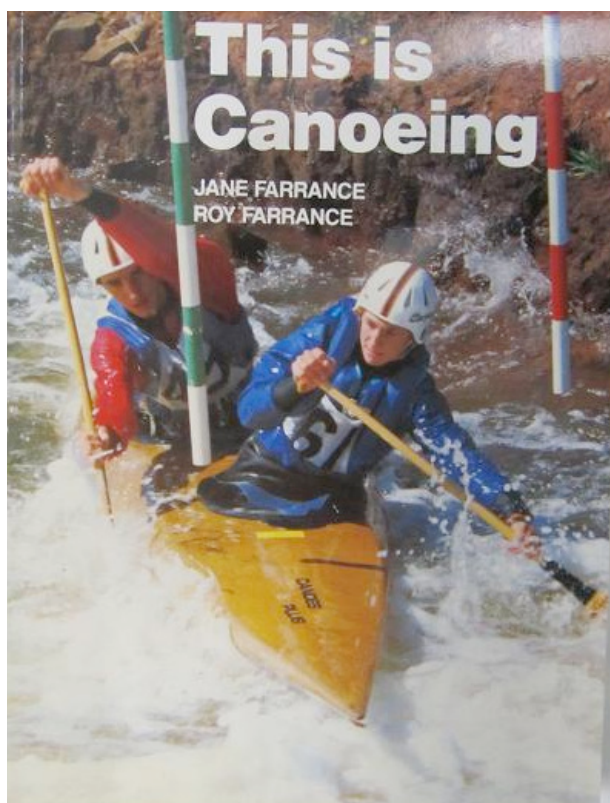


The water tank at Balquhidder is of steel construction. It was mandated by the Parks department.

ABW Library's latest addition

## *This is Canoeing*

Review by Karen Madera



This book has been written to give practical knowledge about the design, construction and choices available in both Kayak and canadian canoes and their accessories. It then goes onto to teach the basic techniques for both type of craft. These basic techniques are very important because they are the foundation of your canoe skill. If they are weak or defective it will inhibit your future development.

After mastering these basic skills and even the eskimo roll, this book then goes further and with great detail into river reading and how to handle whitewater when in a canoe. For people who would like to broaden their canoeing experience there is a section on all the different varieties of canoe sport.

A major emphasis through out the book has been on safety, not only in the respective chapter, but right throughout the whole book, as good canoeing is safe canoeing.

The vast majority of canoeists are involved in touring and this book serves the tourer, in that it explains the logistics of touring, the common traps and the enjoyment for everyone from the oldest to the youngest member of the family.

This is Canoeing is a book for all canoeists.

## Demise of the Grampians Long Weekend

By John Bartlett

I joined the Club in 1980, and since 1983, with about 3 exceptions, there have been annual bus trips to the Grampians. This year, that has ceased, and the Club needs to ask itself why? Surely this is a great pity for ABW. Is it the age of members, agility, expense, distance, lack of interest, lack of leaders that there was minimal interest this year?

The Grampians National park is an absolutely superb place for bushwalking - there are many

different walks to do, so walking there can never become boring. Views, wildflowers in Spring, camping places are all good, and there is great variety in the walks.

Perhaps the Committee could discuss this matter at length, as well as having an open discussion at a general meeting in an attempt to revive interest in annual trips to the Grampians.



# 30 of Willis's YEARS Walkabouts

**After 30 years of remote walking tours, Russell Willis turns his gaze towards the future**

2016 will bring the 30th anniversary of the first tour I ran using the name Willis's Walkabouts. For me, this is a great motivation to ensure 2016 is extra special.

For 30 years, I have been blessed in earning a living doing something I love. I visited many wonderful places and met many wonderful people. I have lived a life that many only dream about.

Unfortunately, the price for continuing to run this business has been an increasing amount of office work. I've had enough. It's time to concentrate on the things I truly enjoy rather than paperwork.

Times change and so must Willis's Walkabouts. I ran my first ad in *Tandanya* more than 25 years ago. But I am now phasing out all my print advertising, so this will be the last print advert I run here. As such, I'd like to say thanks to all the members of the *Adelaide Bushwalkers* who have supported us along the way.

The next phase is to consider what next. To celebrate 30 years, I have created a list of the trips I most want to do and will focus on running these over the next few years. I welcome any expressions of interest from those who would like to join me.

The best way to find out about those trips is to sign up for my free newsletter using the contact button on the website.

After that there's the matter of succession. While Willis's Walkabouts will definitely continue to exist, it will need to do so with far less of my involvement in the office work. I will, however, continue to lead walks for as long as I continue to enjoy it. And, of course, other walks will continue to be led by my small, select team of guides.

Yours,  
Russell Willis

*Russell Willis*



**Kimberley, Kimberley, Pilbara, Central Australia – our bushwalking tours cover them all. Trips from three days to six weeks, easy, hard or in between. Our overseas trips are different to anything else on offer anywhere: Patagonia, Scandinavia, southern Africa, Madagascar & more. Check out the trip lists on our website and see for yourself.**

**Visit the Willis's Walkabouts website or enquire for more information about our upcoming tours today.**

**[www.bushwalkingholidays.com.au](http://www.bushwalkingholidays.com.au)**

# The Logbooks on Peaks Project

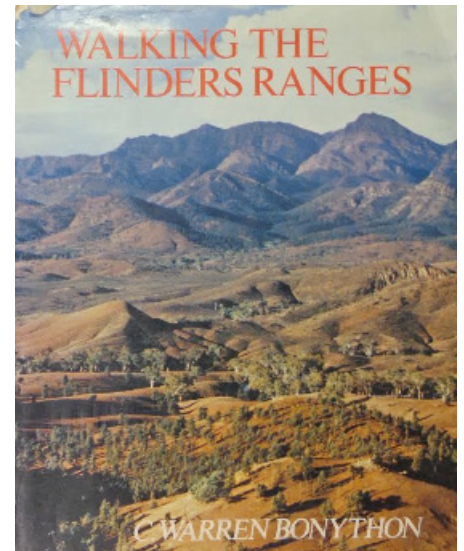
## More gems from the log books

By John Bartlett

Warren Bonython's 1956 and 1968 entries in the North Tusk log book and cover of his well known book in which he refers to his two visits to North Tusk Hill. These log books will be added to the others we possess which will be scanned and stored for posterity.

Note that Freeling Heights is included in the list of peaks in my article in the last edition of Tandanya.

Information from the Freeling Heights log book may help clarify the notes in that article.



Warren Bonython and  
Golden Gators reached  
this summit  
called "North Tusk"  
at 2.0 pm. on  
Sunday, 16<sup>th</sup> Sept.  
1956.  
We believe that this  
is the first time that  
this peak has been  
visited.



A typical ABW logbook



The late C Warren Bonython AO - Bush-walking legend and Heysen Trail visionary  
[heysentrail.asn.au](http://heysentrail.asn.au)

Warren Bonython &  
Christopher Game  
visited this place -  
"North Tusk" (c. 3050ft.)  
- on 1<sup>st</sup> September, 1968.  
It is near sunset,  
& death clouds are  
flowing up from the  
North-west. Our camp  
is on the Gammon Plateau  
to the south. We saw  
[to Ray Sinclair-Wood & Peter  
Wald - we hope you have  
got walking this Sept.]  
See Page of



Image: [http://www.exploroz.com/Places/41577/SA/North\\_Tusk\\_Hill.aspx?s=SA](http://www.exploroz.com/Places/41577/SA/North_Tusk_Hill.aspx?s=SA)

View (facing West) from North Tusk Hill, Gammon Ranges National Park

# Satellite phones for remote bushwalking

By Bruce Marquis



these satellites were launched in the late 1990s before the company went through bankruptcy. Since then only seven additional satellites have been launched but an updated constellation of 66 satellites called Iridium NEXT is currently being developed and is planned for launch between 2015 and 2017.

Each satellite maintains contact with two to four adjacent satellites, and transmits calls between them creating a large in-orbit network. A satellite only stays in view for seven minutes at the equator. When the satellite disappears from view, an attempt is made to hand the call to another satellite. If no other satellite is in view, the connection is dropped. This may occur when the signal from either satellite is blocked by an obstacle. With successful inter-satellite hand-overs a quarter-second interruption may be noticed.<sup>1</sup>

**A**BW is considering the purchase of a satellite phone. Here is some research to help enable a decision to be made.

## The Major Players

### Iridium

Commercial service started in November 1998 but the company took a great risk in its ambitious program to launch multiple low earth orbit satellites and the company went into Chapter 11 bankruptcy in 1999. It has since been brought back to life with the not inconsequential support of the US military.

The Iridium system requires 66 active satellites in orbit at 780 km and spare satellites are kept in-orbit to activate in case of failure. Most of

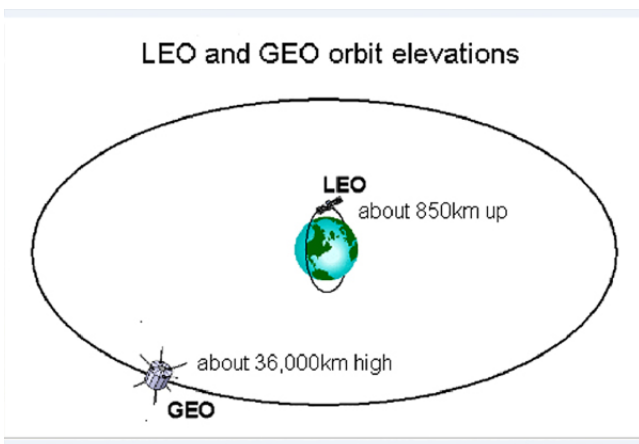
Gateways are located in Tempe, Arizona and Wahiawa, Hawaii (owned by the US Defence Information Systems Agency). The pre-bankruptcy Iridium built eleven gateways, most of which have since been closed.

### Inmarsat

This British based company is the oldest satellite phone operator, founded in 1979, and has its roots in marine communications as can be discerned from the full name of its nemesis, the International Maritime Satellite Organisation (INMARSAT), a non-profit intergovernmental organisation established in 1979 by the International Maritime Organisation a United Nations' maritime body. It provides telephone and data services through eleven geostationary satellites. Services include voice calls, low-level data tracking, high-speed Internet as well as distress and safety services. The company also provides a mobile Integrated Services Digital Network (ISDN) used by the media for live reporting on world events via videophone. The first two of Inmarsat's most recent series of satellites, known as the "I-4" satellites, were launched in June and November 2005 with the third and final satellite was deployed in 2008.

There are three types of coverage related to each Inmarsat I-4 satellite. Each satellite is

<sup>1</sup> Wikipedia





equipped with a single global beam that covers up to one-third of the Earth's surface, apart from the poles. Overall, *global beam* coverage extends from latitudes of  $-82$  to  $+82$  degrees regardless of longitude. There are also *regional beams* each of which covers a fraction of the area covered by a global beam, but collectively all of the regional beams offer virtually the same coverage as the global beams. Each I-4 satellite provides 19 regional beams. *Narrow beams* tend to be several hundred kilometres across. While much smaller than the global or regional beams, they are far more numerous and hence offer the same global coverage. Narrow spot beams allow smaller antennas and much higher data rates and form the backbone of Inmarsat's handheld and broadband services. This coverage was introduced with the I-4 satellites and each I-4 satellite provides around 200 narrow spot beams.

### Globalstar

Globalstar uses a low Earth orbit (LEO) satellite constellation for satellite phone and low-speed data communications, somewhat similar to the Iridium satellite system. The Globalstar project was launched in 1991 as a joint venture of Loral Corporation and Qualcomm. In 1994, there was announced the formation of Globalstar LP, a limited partnership established in the US with financial participation from eight other companies, including Alcatel, AirTouch, Deutsche Aerospace, Hyundai and Vodafone. <sup>2</sup> The company filed voluntary petitions under Chapter 11 of the United States Bankruptcy Code in 2002. After a number of incarnations Globalstar, Inc., was formed in March 2006. In 2007, Globalstar launched eight additional first-generation spare satellites into space to help compensate for the premature failure of their in-orbit satellites. Between 2010 and 2013, Globalstar launched 24 second-generation satellites in an effort to restore their system to full service and regain consumer confidence.

Globalstar satellites are simple "bent pipe"\* analog repeaters. A network of ground gateway stations provides connectivity from the 40 satellites to the public switched telephone network  
 2 Wikipedia

\*Most satellites are bent pipes, meaning that the uplink signal is received, amplified, translated to a downlink frequency, amplified again, and directed toward the earth using a high-gain antenna. A bent pipe satellite does not demodulate and decode the signal.



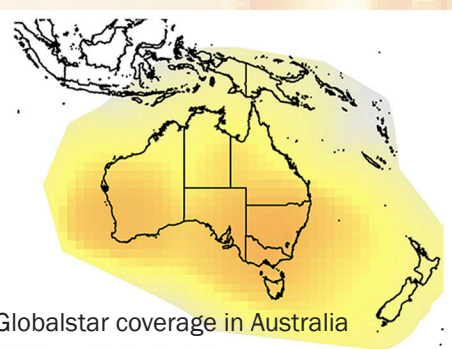
Iridium coverage is global



Inmarsat coverage



Thuraya coverage and direction of satellite



Globalstar coverage in Australia

- Primary Globalstar Service Area
- Extended Globalstar Service Area (customers may experience a weaker signal)
- Fringe Globalstar Service Area (customers should expect to experience a weaker signal)

and Internet. A satellite must have a Gateway station in view to provide service to any users it may see. There are no gateway stations to cover certain remote areas (such as areas of the South Pacific and the polar regions), and service cannot be provided even if the satellites fly over them. Twenty Four Globalstar Gateways are located around the world with seven in North America.

## Thuraya

Thuraya is from the Arabic name for the constellation of the Pleiades, and is a regional mobile satellite phone provider based in the United Arab Emirates. It provides mobile coverage to more than 110 countries in Europe, the Middle East, North, Central and East Africa, Asia and Australia. It has about 350 roaming partners worldwide and offers GSM roaming services over land-based mobile GSM networks. There have been 3 geostationary satellites launched with the first being a test platform now in 'junk orbit'. The Australian service uses a satellite parked over the Singapore region.

## LEO or GEO?

Some major considerations are what orbit configuration is used and basically how reliable is the service based on the financial health of the company as well as the age, quality and type of satellites? The advertising spin about satellite services from the local phone companies can give the impression that just putting the word satellite in front of phone equates to buying a James Bond high tech device and without some research that all satellite services are roughly the same. Also relying on a satellite phone in a remote area should give no more trouble or be of any more concern than using a smart phone in the city only it's got a big ugly antenna and costs a lot more.

The subject of whether low earth orbit or geostationary earth orbit is better is an important one. The Iridium service with it's low earth orbit constellation of 66 satellites is pretty bullet proof in providing accessible satellites across the earth. You can be guaranteed two to three satellites somewhere in the sky above the horizon. However this does not mean in your line of sight which they must be for connection as they may be low on the horizon behind a hill or tall trees. They travel fast

and sometimes may only be able to transmit your call for a matter of a few minutes in mountainous terrain with patchy views of the sky. Another satellite may be about to appear soon but in the meantime your call has been disconnected. This scenario is not likely in outback Australia, however, with it's vast expanses of open ground.

The geostationary satellites can also be inaccessible by being behind hills or trees and you can't just wait for another satellite to appear, you have to move to a different location to get reception. Also, there may be a problem with the reliance on one or two satellites. They are complicated devices in the hostile environment of space and we all know about Murphy's Law. The satellite will have a hiccup when you arrive at that crucial waterhole in 40 degree heat but there's a dead goat in it and you've no water left and it's a day of walking to the next guaranteed supply. This notice on the Pivotal website is a bit of a worry when you consider Thuraya has just one satellite for their Australian service:

### Important Notice:

Thuraya service has been fully restored. Thuraya advise they have restored full service on the Thuraya 3 Network. In the coming days and weeks they will closely monitor the network performance and ensure its operational stability. Thuraya also advise they are continuing to investigate the root cause of the anomalous event and will provide further information to their customers. <sup>3</sup>

Geostationary satellites are a long way away, 30,000 kms +, and you must have the antenna pointed directly at the satellite for guaranteed reception. Just putting the phone down momentarily, for example to attend an injured person, will likely break the connection. This is unlikely to occur with a low earth orbit service such Iridium. In fact, one report I read stated that they often got reception with Iridium even with the antenna not deployed. <sup>4</sup>

The question of solvency and the astronomical (excuse the pun) cost of the manufacture, launch and maintenance of the satellite services is also important. When the Iridium service was in deep pooh in the late '90's they were at the point of

<sup>3</sup> Pivotal News August 08, 2015

<sup>4</sup> Frost & Sullivan Evaluates Features and Performance of Satellite Phones, 2010,

pushing the button to initiate a program to send all the satellites to fiery destruction by de-orbiting them until saved by negotiation with investors at the 11th hour. The Globalstar network was nearly crippled by an unforeseen technical problem that led to serious degradation of the service once the satellites were in orbit. They have had to launch an entire second generation of satellites to fix the problem. Not only were services severely degraded for customers, but the company could have gone over the financial cliff.

In addition, the off the planet, sky high, out of this world etc. cost of simply upgrading dozens of satellites for the low earth orbit constellations can mean outdated hardware stays in orbit long after a much closer use-by date has been forced into reality by rapid advances in technology as well as rapid cultural changes, such as the global adoption of and addiction to the internet and everything on-line. When Iridium launched their first constellation they had low data transmission speeds suitable for voice only services. With the need for faster data transmission speeds, not just voice communication, they have been forced to replace the entire fleet of satellites to stay competitive. This they are only now about to do long after the requirement became apparent. In comparison, the services using a small fleet of geostationary satellites, such as Thuraya, can

quickly upgrade with a few launches. I won't give a detail review of what I have read about handsets and, especially since I haven't actually used any, I will leave further analysis to others. So in the table below is a brief summary of what I think of handsets suitable for remote trekking and being able to effectively provide voice, text and GPS location in emergency situations. I only spoke to one serious satellite phone vendor, International Communication Systems at the Port, and it is amazing how quickly such discussions resolve questions. I encourage other members to do so and report their conclusions. An example of their valuable input was that if we chose Iridium we shouldn't sign up through Telstra but instead use Pivotal. In addition to providing excellent service they work closely with Iridium and in fact have three of their own ground stations in Australia directly linked to the Iridium system. From that one conversation I made up my mind what I thought was the best option: The Iridium Extreme handset, \$1,900 on the Pivotal website, although International Communication Systems will forward a quote.

The Iridium Extreme® handset does it all, enabling you to make more emergency connections that really matter, under the harshest conditions from the furthest reaches of Australia. Iridium Extreme provides an in-hand solution for voice, SMS, SOS and tracking with GPS accuracy, enabling you to make the connections that matter, under tough conditions, from all over Australia and the world. It meets stringent standards for durability including MIL-STD 810F and IP-65 and has the first dedicated, emergency SOS button, enabling two way communications during emergency situations.<sup>5</sup>



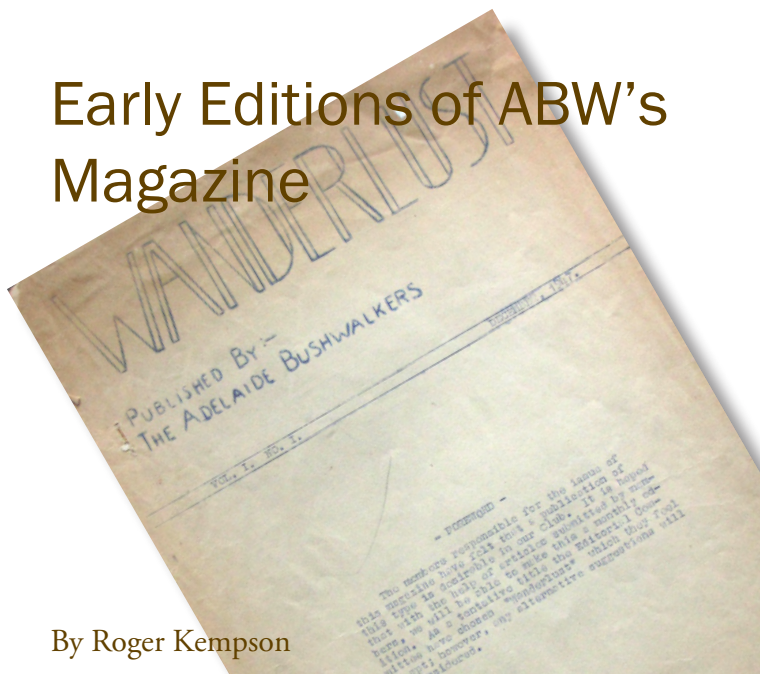
This is the only phone they said could serve well in mainland Australia, Tasmania and New Zealand, which where I considered would be a good selection of locations ABW visits. If we only wanted a phone that is suitable for South Australia, ie Flinders Ranges, then the Inmarsat or Thuraya could be considered. They did not recommend Globalstar. They recommended using a casual plan whereby you pay a \$110.00 connection fee, \$22.00 monthly access then \$6.60/minute. This is a higher per minute rate than if a 2 year contract is used.

**References:**

1. <https://en.wikipedia.org/wiki/Iridium>
2. <https://en.wikipedia.org/wiki/Globalstar>
3. [http://www.pivotal.com.au/pivotal\\_news.php](http://www.pivotal.com.au/pivotal_news.php)
4. Frost & Sullivan Evaluates Features and Performance of Satellite Phones, 2010, Jake Wengroff <http://www.frost.com/prod/servlet/press-release.pag?docid=211842212>
5. [http://www.pivotal.com.au/pivotal\\_iridium\\_9575.php](http://www.pivotal.com.au/pivotal_iridium_9575.php)

Company	Can handset rough it?	Cost	Range of handsets
Iridium	bullet proof	top shelf asks top dollar	limited but tick all the right boxes for remote outdoor use
Inmarsat	tough enough	more reasonable and still high quality	limited range but high standard of equipment and service
Thuraya	good enough	competitive	2 or 3, mainly consumer standard
Globalsat	questionable	bargain	only 1 suitable for consideration

# Early Editions of ABW's Magazine



By Roger Kempson

## WANDERLUST

Published by The Adelaide Bushwalkers Vol 1 No.1 December, 1947

### FOREWARD

The members responsible for the issue of this magazine have felt that a publication of this type is desirable in our Club. It is hoped that with the help of articles submitted by members, we will be able to make this a monthly edition. As a tentative title the Editorial Committee have chosen "Wanderlust" which they feel is apt; however, any alternative suggestions will be considered.

Editorial Committee for this Issue

Messrs: Arthur Cuddihy, Joe Morgan, Charles Norton & Brian Watson. Misses: Elva Bennett & Isabella Woolard.

### ON THE WALLABY

Ever since our first trip in September, 1946 (it was later discovered to be the coldest night of the year) we have conducted a two day walk practically every weekend. In addition, over the last four months, Sunday walks have been organized. Most of these have been within a radius of 60 miles of Adelaide, covering a variety of country on trips ranging from lazy weekends on the coast to 32 mile marathons.

The above is the cover page and the first paragraph of the first page of the magazine of Adelaide Bushwalkers. Note that in 1946, H.A. (Bill) Lindsay was instrumental in calling a public meeting to discuss the formation of a bushwalking club. This meeting took place on 17th October and an interim committee was formed to draw up a constitution and bring the club into being. A walk had already been held before this Inaugural Meeting (as indicated above). Wanderlust was priced at sixpence - it also contained notice of a proposed Christmas celebration to be held at the Morialta Reserve kiosk on 17th December, costing three shillings and six pence per person, consisting of a two course dinner followed by an entertainment to be provided by members. I vaguely remember this kiosk - it was razed by fire during my early years of bushwalking. As an aside, my Macquarie Dictionary defines "wanderlust" as "an instinctive impulse to rove and travel about (German origin)"

# TARNDANYA

VOL 1 NO.2 Official Organ of the ADELAIDE BUSH WALKERS  
- January 1948

Editorial Committee: A. A. CUDDIHY R. H. CASLING C. C. NORTON

Production Committee: Misses. I. Woollard & E. Bennett - Messrs. J. Morgan & B. Watson

### EDITORIAL

This magazine is being produced with a definite object, to build up a bigger and better Club than the one which has, within its short life of 18 months, made such rapid progress. We want to knit even more closely our members so that we may form a strong and energetic body willing to pursue our aim of conservation in all its forms. It will, incidently, let you know what the other fellow is doing and provide you with some interesting, educational, and not unhumorous reading..... We cannot over-emphasise the warm welcome that awaits a newcomer and the happy comradeship that is immediately his. One doesn't need to know somebody in the Club to make a start; either write to our Secretary for particulars, or just bowl along to a week-end trip, a Sunday Walk, or a general meeting, and someone will tell you all you want to know.....

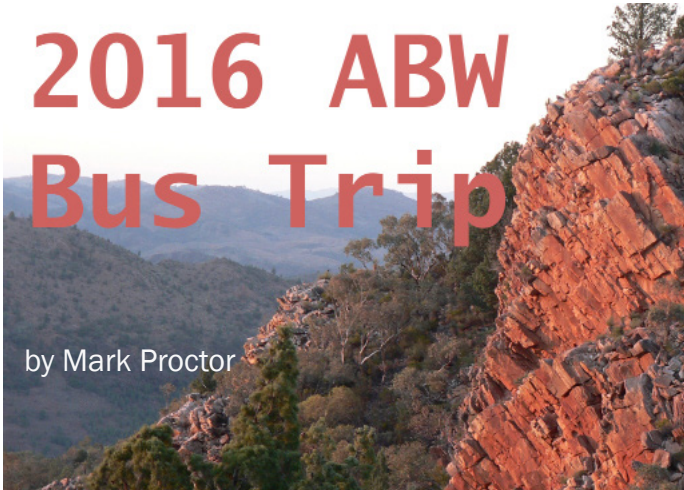
TOAST TO THE MAGAZINE Friends - I give you a toast - "To the future of walking - May our legs never grow shorter nor our feet less itchy".....

THE NAME OF THE CLUB'S MAGAZINE We have chosen Tarndanya for the name of this magazine; it being the only one of many suggestions received to meet with unanimous approval from the committee. "Wanderlust" we opposed from the outset and "Crow-Eater" was not received with open arms. But with "Tarndanya" the reception was different; it was accepted much more enthusiastically and, since it was an aboriginal word, it was selected.....

Tarndanya..... is the name that was given to the site of Adelaide and its suburbs by the aborigines that were here before us. The actual meaning of the word is "Place of the Red Kangaroo".....

Years later it was believed that Tarndanya was an incorrect spelling and the September-November edition in 1971 became "Tandanya" and the numbering began again, ie it was Volume 1 No.1 and in the Editorial the editor PMN Mossel begins with - Well, this is another first. The first issue of Tandanya in its present format, and correct name, please note. I feel rather honoured to be Editor, and I hope to carry the job out as well as possible. However, Tandanya is the Club Magazine, not mine!! Therefore, it is really up to you, rank and file members, whether Tandanya gets off, and stays off, the ground!.....





# 2016 ABW Bus Trip

by Mark Proctor

The club bus trip for 2016 will be held on the June long weekend (3-6 June). For both new and old members this is a highlight of the year as it is a weekend that we travel together on the Friday evening to a three day walk in the Flinders Ranges.

With the trip some six months ahead, this early notice is to give walk leaders the chance to plan well ahead for about four walks starting from Aroona Valley. The walks should be posted on the Activity Program on the club website by February so that members are able to sign-up to their chosen walk well ahead of time.

As well as signing up, it is also essential to pay the bus fare, probably about \$140, either online or by cash at a meeting. Your place on the bus is not assured until you have paid. The more that sign up, the lower the cost can be. The actual cost will be specified by the end of April.

Our base for the trip this coming year will be Aroona Valley which is about an hour north of Wilpena Pound. The bus will depart from the Adelaide Bus Station on Franklin Street in the city at 6 pm on Friday 3rd June. We will have a 30 minute dinner stop at Port Wakefield where you can buy a take away meal or enjoy a bring-your-own meal. Then it will be a long drive until we arrive at the rough campground at Aroona Valley a bit after midnight. The only thing to do then is set up your tent and get some sleep.

On the Saturday morning, walk leaders will brief their groups before setting off about 8:30 am. Hopefully

there will be walks of different difficulty to choose from. Eventually all the groups will gather again on the bus at midday on the Monday and we will start heading back. We will make a 30 minute lunch stop at about 1 pm before heading off to Adelaide; arriving at the bus station around 7 pm on Monday 6th June.

This bus trip has been running for decades and is always enjoyed by all members. It is a great time to have three days to explore the Flinders Ranges while there is sufficient water still around and it is not too hot. So we are looking for our skilled leaders to propose walks for this Bus Trip Weekend and for members to sign-up for the coming trip.



An ABW group views Yanyanna Hill, south of Aroona Valley.



Descending into Bunyeroo Creek towards the campsite during a trip from Aroona Valley to Bunyeroo Creek and Mt Rupert in 2006 led by Dave Paterson.



View from the tent at 7 am while camped high on Mt Rupert.



By Dr. Ian Musgrave

Summer nights are short but warm, although if you stay up late you will be rewarded with some excellent sights. This summer, the evening skies are devoid of bright planets until late December, so most of the bright planet action remains in the morning skies. If you are prepared to get up early you can see some very nice things.

The nights of the Summer Full Moons are Friday December 25 (Merry Christmas), Sunday January 24 and Tuesday February 23. Nights on and around the full Moon make moving around camp easy, but the bright Moon washes out the glorious stars.

In early summer all the bright planets are either hidden in the Sun's glare or lined up in the morning sky. Jupiter, Mars and Venus form a nice line in the morning early on, but Jupiter and Mars move away from Venus as summer wears on, then Saturn enters the morning skies and comes close to Venus. Venus is easily recognisable as the brightest object in the eastern morning during early twilight in summer. Jupiter is the second brightest object in the morning sky (not counting the Moon of course) and Mars is an undistinguished and dimmish red dot between them. The Moon joins the planets a various intervals to make rather nice views

On the morning of December 4 the waning Moon is close to Jupiter. Then on December 6 the thinning crescent moon is close to Mars, and then on the 8th the thin crescent Moon is close to Venus. If you have a telescope, you may be able to see comet C/2013 US10 Catalina between them. Finally on December 31 Jupiter and the waning Moon are close again. Swift Mercury is visible in the evening in December; although low above the western horizon it should be readily visible. The best viewing is from roughly the 15th to the 30th of December. It is visible in the late twilight to early evening as the brightest object above the western horizon, with no bright stars near it. Mercury is then lost in the twilight until February.

On the morning of January 4, the crescent Moon is below Mars. On January 7, the crescent Moon, Venus and Saturn form a triangle. On the morning of January 9 Venus and Saturn are very close, less than a finger-width apart. The pair forms a narrow triangle with the bright red star Antares and a line with Jupiter and Mars. From early January Jupiter is now visible above the eastern horizon before midnight. On the 27th Jupiter and the crescent Moon are close.

In February, Jupiter can be seen above the eastern horizon from around 10:30 pm. If you have binoculars with you, Jupiter's Moons are easily seen in even small binoculars. On the 24th and 25th of February Jupiter and the Moon are close. In the morning the waning Moon brackets Mars on February 1 and 2. On February 4 the crescent Moon is close to Saturn. The on the 6th the thin crescent Moon, Venus and Mercury form a triangle with the Moon. Mercury and Venus are a hand-span from each other in the twilight from the 6th to the 22nd. The pair should be readily visible low to the horizon from the start of twilight.

At the start of Summer, the "summer constellations" Taurus, Orion and Canis Major, featuring the bright star Sirius, can be seen gracing the eastern horizon from around 9pm. The distinctive "A" shape of the Hyades cluster, which forms the head of Taurus the Bull and the bright red star Aldebaran which forms the Bulls' eye is easily recognisable, to the left of due east. To the left of this again is the obvious tiny cluster of the Pleiades. Almost due east is the "saucepan" which is the belt of Orion the hunter, another iconic sight of the Australian summer skies. To the right of due East, Canis Major is not an obvious constellation, but bright white Sirius, the brightest star in the sky, is easily recognisable.

At the start of Summer, the "summer constellations" "climb higher in the sky. If you have binoculars the Pleiades, the Hyades and the belt of Orion are nice hunting grounds. The great Orion Nebula is tiny in binoculars, but easily seen under pristine bush skies. In the north, there is not much happening until late summer when the bright star Capella rises above the northern horizon. Looking south, at the beginning of summer the Southern Cross will be upside down, grazing the Southern horizon, and difficult to see without a clear level horizon. As summer wears on, the cross will slowly rise back above the horizon.



Adelaide Bushwalkers is a hiking club enjoying multi-day hikes carrying packs & camping, day walks, kayaking, cycling and other activities, near Adelaide, South Australia & interstate.

### UPCOMING HIKES & ACTIVITIES

A selection of our upcoming Activity Program is below.

[View full Activity Program](#)

DATE/S	ACTIVITY TYPE	NAME / LOCATION	DURATION
Wed 3rd Dec	Meeting	ABW Christmas Bush & Photo Competition	
Thu 3rd Dec	Training Walk	in City	S-M-E
Sat 5th - Sun 6th Dec	Kayak/Canoe	Blacktown Christmas Parade	
Wed 9th Dec	Watermark Walk	Oaklands Wetland - Flinders University	M-C-C
Thu 10th Dec	Training Walk	in City	S-M-E
Sat 13th Dec	Day Walk	Hopson Trail Walk 12 - Myer Oval to Mt Lefly	M-F-F

For further information go to our website: [www.adelaidebushwalkers.org/](http://www.adelaidebushwalkers.org/)

