Bushwalk Australia

Discover & Explore

Volume 24, August 2017

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Bushwalk Australia Magazine An electronic magazine for http://bushwalk.com Volume 24, August 2017

"We acknowledge the Traditional Owners of this vast land which we explore. We pay our respects to their Elders, past and present, and thank them for their stewardship of this great south land."



Happy hiker woman hiking in the rain with backpack by Maridav 6

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Please send any articles, suggestions or advertising enquires to Eva.

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We would love you to be part of the magazine, here is how to contribute - Writer's Guide.

The copy deadline for the October 2017 edition is 31 August 2017.

Warning

Like all outdoor pursuits, the activities described in this publication may be dangerous. Undertaking them may result in loss, serious injury or death. The information in this publication is without any warranty on accuracy or completeness. There may be significant omissions and errors. People who are interested in walking in the areas concerned should make their own enquiries, and not rely fully on the information in this publication. The publisher, editor, authors or any other entity or person will not be held responsible for any loss, injury, claim or liability of any kind resulting from people using information in this publication. Please consider joining a walking club or undertaking formal training in other ways to ensure you are well prepared for any activities you are planning. Please report any errors or omissions to the editor or in the forum at BWA eMag

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Competition: Australia August 2009



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15 Things You May Have Never Known About Dehydrating Foods Hints and information about drying



Soup – The Perfect Winter Warmer Chicken Noodle Soup and Miso Soup

From the Editor

From exploring great rivers in NSW to climbing peaks in Europe, I hope you find inspiration in this edition.

My wife, kids and I are planning a trip to Tassie in January, so the kids are getting new tents, sleeping bags and mats. After camping out in the lounge room for a few nights we finally got the kids and the shiny new gear dirty in one of the camping caves near Sydney. The trip was a great reminder to me that the micro-adventures and preparing for bigger trips can be just as much fun as the bigger trip we are working towards. Reading through the inspiring journeys of the Great River Walk and Mt Triglav further reminded me that great adventures don't just happen, it takes time and effort to build up to them. The effort pays off.

I hope you enjoy reading the tips from our regular contributor (extraordinaire) Sonya with her wonderful tips on dehydrating food and other yummy food ideas. After building a number of first aid kits for different groups and instructing first aid over the years I finally got around to writing an article on packing a first aid kit - I hope you find it helpful. I also hope you enjoy the poem, news items and spectacular photography.

Whatever your next adventure may be I hope it is a great and memorable one.

Happy walking Matt :)

metter Mellubane

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www.bushwalk.com

Declaration

The bushwalking community is a small world and paths often cross. To improve transparency I thought it would be helpful to list my associations within the outdoor community. In many cases I approached the authors of the articles included in this edition and suggested the topics. The opinions stated in articles are those of the authors and not of those involved in the production of this edition. The authors are mostly people I know through Bushwalk.com. I operate Bushwalk.com and Wildwalks.com and have written several walking guide books, published by Woodslane, I have also written for Great Walks. I contract part time to National Parks Association NSW on an ongoing basis to coordinate their activities program. I have had a partnership with NPWS NSW and have hosted advertising for *Wild* magazine. I have also partnered with a large number of other organisations in environmental campaigns and have a regular bushwalking segment on ABC regional radio. There is some commercial advertising through the magazine. I have probably forgotten something - if you are worried about transparency please either write to me or raise the issue on Bushwalk.com.

Videos

First winter ascent of Federation Peak via the notorious Blade Ridge

In 2016 Andy Szollosi led a group of seven in the depth of Tasmania's wettest winter on record.



Wild edibles in the bush

Knowledge about what you can eat along the way, straight from the bush, is something everyone should know. This video will help you identify a few common plants that people often overlook.





The Great River Walk Roger Treagus

Imagine walking across the ancient volcanic landscapes

Imagine walking across the ancient volcanic landscapes of the NSW Southern Tablelands past 160-year-old grand homesteads, plunging into a gorge 50 kilometres long, traversing a world heritage wilderness. Imagine walking the banks of a broadening river past some of the earliest farms established in Australia. Imagine entering a second wider gorge with the longest estuary on the east coast where seven national parks meet. This is a short description of the Great River Walk (GRW), a 450 kilometre long-distance track concept located on Sydney's outskirts. The following article details the slow progress in getting this walk established.

The rise of international long-distance walks – Sydney's response

Long-distance walks have raised the profile of bushwalking. Many of these walks are now internationally famous and are big tourist drawcards with names like the Milford Track, Appalachian Trail, Inca Trail and the Camino de Santiago. In NSW the peak bushwalking activity is adjacent to Sydney which can claim at least three such long-distance tracks, although not with the

same international profile. These are the 44 kilometre Six Foot Track from Katoomba to the Jenolan Caves, the

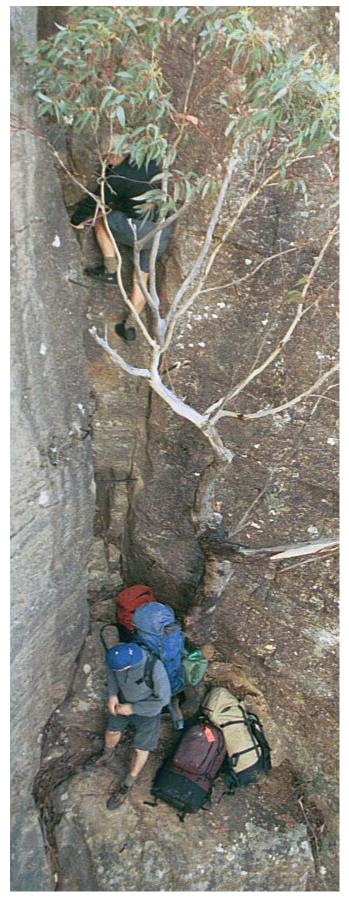
There is no established track that follows the Hawkesbury River.

130 kilometre Mittagong to Katoomba bushwalkers' corridor and of course the 250 kilometre Great North Walk from Sydney to Newcastle, which traverses a fantastic array of environments and poses a significant walking challenge. There is also the potential for a 150 kilometre Great South Walk from Bundeena to the Shoalhaven and a 300 kilometre Great West Walk from Sydney to Lithgow and on to Bathurst known as Coxs Road.

Born in 1999 the GRW Concept has still to find its legs

However, even taking a casual look at a map of the Sydney region shows an obvious gap in this network. This gap has no established track on the course of Sydney's major river, the Hawkesbury from the source to sea. Where the Great North Walk was conceived and built in just a few years and in time for the bicentennial, by contrast the GRW, the route down the Hawkesbury, has been stuck in the planning stage for 18 years. In 1999 a committee of government, local business and bushwalking interests was formed to develop the concept, design the route, negotiate with landowners and seek the necessary approvals and financial support. The resources of the NSW government were available for the Great North Walk in 1987 but not the GRW in 2000, a major reason for the difference in the rate of progress.

One of the early issues was to find out whether a feasible walking route existed all the way from source to mouth. The Sydney Bush Walkers Club (SBW) offered to do all the on the ground route finding. This turned out to be quite a challenge and took over four years of walking from near Crookwell where the Wollondilly rises to Broken Bay, 450 kilometres away.



Ascending Narrow Neck at Tarros Ladders on the GRW

Finding a walkable route and meeting the enthusiastic river communities

Unlike the Great North Walk, which mostly utilises public land corridors, the first 150 kilometres of the GRW crossed private property. So we in SBW negotiated one off access with over 80 property owners. This process was not just about seeking permission to cross private land. It was much more. It was about connecting with local people and communities and getting to understand property owners' relationship with the land. It was also about gauging their support for the GRW concept. With only one exception they all embraced the idea with enthusiasm and gave our walking group a great deal of assistance. One landowner provided us with a Devonshire tea in china cups in one of his paddocks as we passed, one gave us unlimited beer at the end of a hot day and another gave us accommodation in his tin shed after an ebullient "pig on a spit" BBQ plus wine and a live bush band. It was one of the joys of our route finding project that we met such hospitable bush people. Their occupations were across the spectrum, from city stockbrokers to fifth generation farmers; from paintball skirmish operators to nuclear scientists; from hobby farmers to ancient bushmen who thought a nail through the foot was merely a flesh wound. Their stories added immeasurable depth to the walk experience.

The outcome of the route finding was confirmation of a walkable route all the way from the source to Mount White on the lower Hawkesbury. The route went via Goulburn, the Wollondilly Gorge, Goodmans Ford and on to Yerranderie and Katoomba west of the restricted catchment, the major storage for Sydney's drinking water. The route then turned east through the Blue Labyrinth to rejoin the river near Glenbrook. Local roads

provided access downstream to Wisemans Ferry. From there the convict-built Great North Road could be used through

One of the early issues was to find out whether a feasible walking route existed all the way from source to mouth.

Dharug National Park connecting with Simpsons Track to Mangrove Creek. An easy section then accessed the Glenworth Valley, Wendorey Park, Neverfail, Marlow and on to Mount White. All the way from the source we utilised existing tracks or easily negotiable routes. These ended at Mount White and the way through Popran National Park was trackless. However, the bush along the dry ridges in the park was relatively thin and progress was possible. Eight hours walking from Mount White brought us to the Peats Ferry Bridge and on to Brooklyn. The final stage was by ferry to Little Wobby, the existing track system through Brisbane



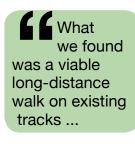
Waters National Park to Patonga, a ferry to Palm Beach and then the final push up to Barrenjoey Lighthouse and the finish line.

What we found was a viable long-distance walk on existing tracks, negotiable routes and roads all the way except for 15 kilometres of new track construction. From a start just before the Sydney Olympics we finished on a Pittwater beach in 2004 having walked the route over 35 weekends. So what has happened in the last 13 years?

A need for political will

The Committee found that establishing a viable route was one thing but establishing the long-distance track as an existing

physical entity was quite a separate issue. Unlike the development of the Great North Walk there has been a lack of political will to push this proposal even when it could be



shown how such a track could be both a great educational and tourist resource for the river communities and for Sydney. A



The spectacular Wollondilly Gorge

major obstacle is that the route traverses quite remote and rough country in its upper reaches such as the Wollondilly Gorge, where access is difficult, and across private land. Negotiating a permanent right of way with so many landowners is a big challenge not yet attempted, and on a much bigger scale than similar negotiations would have been for the Six Foot Track. To open the top section will take time. It is a different story for the estuary section where the Hawkesbury makes its grand approach to the sea.



Penrith Council shows the way

To raise the current profile of the GRW it was important to actually have sections opened, with proper signs identifying the track as part of the GRW that people could walk. The easiest sections to develop were those where no private land was involved. About three years ago Penrith Council, an active member of the Committee, developed several kilometres of the Nepean's river bank as part of the GRW. This first section immediately became popular indicating the pent-up demand for better access to the river.

The next step

The next step, now in the advanced planning stage, is to open a 55 kilometre section from Lower Portland to Mangrove Creek along back roads and through the Dharug National Park, showcasing a very scenic and historic section of the Hawkesbury. This section can be walked now but official signs similar to those on the Great North Walk are vital to properly identify the GRW, plus a dedicated web site with a Google "track view" feature to promote it. These easy to implement measures would make the GRW much better known. The long-suffering GRW Committee has been plugging away all these years trying to get the message through to our decision makers about all the benefits of having this walk. Its Chair is the Hon Kevin Rozzoli, previously

the State MP for Hawkesbury and a long-time Speaker of the NSW Legislative Assembly. He has never wavered

... the Committee is looking for a new and energetic Chairperson to take this project forward.

in his vision for the GRW and has been incredibly persistent in progressing the project. But 18 years in the one role is a long time when the aims of the Committee are still to be realised and he is hoping to hand the baton on. So right now the Committee is looking for a new and energetic Chairperson to take this project forward.

The economic benefits – a great return on investment

The GRW will give a major economic boost to the local river communities and to Sydney. For example, the soon to be established 55 kilometre Lower Portland to Mangrove Creek Section has minimal establishment costs of about \$30,000. These are just for the track signs and for promotion such as a web site,

an app providing "on track" information triggered by GPS location, printed material, maps and a social media presence. The track and camping facilities already exist. Maintenance costs for tracks and facilities inside Dharug National Park are already in the national park budget.

Compared to this outlay the benefits are

When the Great River Walk is completed it will offer a worldclass long-distance walk right on Sydney's doorstep.

When the Great River Walk is completed it

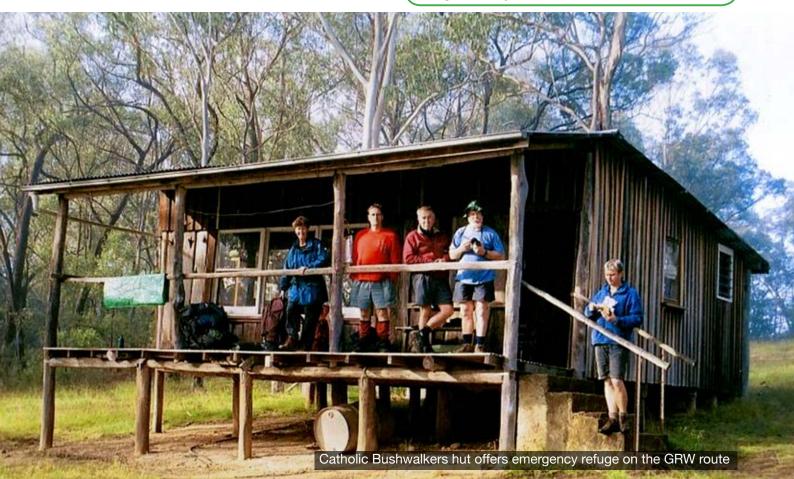
will offer a world-class long-distance walk right on Sydney's doorstep. The GRW just needs momentum with our decision makers to make it a reality. In 1987 the NSW Government started construction of the Great North Walk. Labourers from many Asian countries were brought in to boost the pace of work.

The entire project was completed only one year later. Can that ever happen again?



huge. Research into the tourist industry has revealed an average daily spend by a bushwalker in regional South Australia in 2015 was \$96. In terms of visitation rates an example is Victoria's Great Ocean Walk where 8000 people annually walk this long distance track or 22 walkers a day. If each of these walkers on the GRW spent \$96 locally on supplies from shops, accommodation and transport it would mean an injection into the local economy of \$7-800,000. When the Great River Walk is established and well known, and with its proximity to Sydney, 22 walkers a day may be a conservative figure. Regardless, this is a great return on investment, and that doesn't even include the educational benefits.

Roger is an active bushwalker and walk leader with both Sydney Bush Walkers and the NSW National Parks Association. He led the inaugural "route finding" GRW trek to confirm a walkable route existed from source to sea and is on the GRW Committee. He is a noise scientist by profession and lives on Sydney's Northern Beaches with his wife and teenage son, close to Barrenjoey Lighthouse, the GRW's finish line. He is currently writing a memoir which includes his experiences on the four year walk down the GRW and describes some of the fascinating people he met along the way.



Mount Triglav, Slovenia The North Face and the Krma Valley Neja Fidler Pompe

Line.

Slovenia is in Europe, south of Austria and east of Italy at the north of the Adriatic. Climbing Slovenia's highest mountain Triglav (pronounced tree-glove, meaning three headed), 2864 metres, has a certain allure, particularly over its grand Triglav North Face, a three kilometre wide and 1000 metre high near-vertical face with paint blazes marking only a few of about a hundred routes to Triglav, with most requiring ropes and rock climbing. Our small group of four ventured out there the last weekend in June only to return with incredible stories to tell and even more amazing pictures to show. If I had to describe our trip in three words, it would be *sun, thunderstorms* and *fun*.

On the Krma Route, with stunning views of the Julian Alps

Let the story begin ...

There were five friends, one of whom had never been to Triglav before, one with little hiking experience in the last ten years, a Spanish guy with Triglav tattooed on his arm but with no real experience in high mountains, my husband, who otherwise hikes regularly but does high mountains on rare occasions, and me, so to speak, the most experienced of the gang. With our Triglav team downsized by the most eager member just an hour before our departure – you guessed it, the tattooed guy - it was four friends off to a great new adventure. Our plan was to climb the Prag Route (meaning

Doorstep Route) on Saturday up to Kredarica (cree-dahreeh-tsah), a mountain

f f ... going up a spectacular yet precipitous route and down an easier and safer route seemed like a good plan.

hut just below an actual peak, spend a nice evening in the hut, reach the summit of Triglav early on the Sunday morning, and then go quickly down the Krma Route (kur-mah, meaning Stern Route) before the storms rolled in at noon, as forecast.



The start of the Prag Route with a sculpture of a piton and a krab

We started the hike relatively late at about 9am from the Vrata Valley (vrah-tah valley, meaning Door Valley). What we had done before was much appreciated the day after; we had driven to the Krma Valley in two cars, left one at our predicted finish line, and drove in the other car for half an hour to the neighbouring Vrata Valley, our trailhead. Why? Wanting to make our trip diverse and safe, while also considering the forecast early storms on Sunday, going up a spectacular yet precipitous route and down an easier and safer route seemed like a good plan.



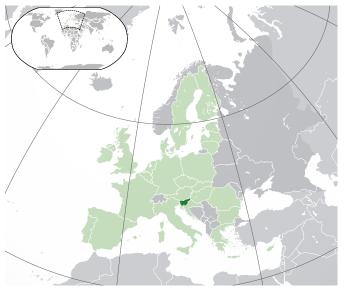
Going up the Prag Route

The Prag Route, arguably the easiest route crossing the Triglav North Face, and as such appropriate for intermediate hikers and up (or beginners with a mountain guide), traverses the remarkable kingdom of the legendary Goldhorn, a white chamois with golden horns that had supposedly chased away everyone upon intruding his territory. The Prag Route is high, hard and spectacular. In those 15 kilometres, it first ascends 1500 metres to the Kredarica Hut, at 2515 metres the highest mountain hut in the Slovenian Alps, and then another 350 metres further up to the very top of Slovenia, Triglav. If you're into adrenaline but prefer adventures that are safe, then the Prag Route is perfect for you.



Another steep section with fixed ropes

About two thirds into the hike, right after climbing the steeper parts of the trail, we passed a group of adult and baby chamois wandering around the vast area of Triglav Plateaus. I'm used to super-shy deer, and chamois are a different sort. While they won't allow being approached too quickly or petted for that matter, they're usually not bothered by human presence, especially if you go by quietly and slowly. One chamois even paid me a visit when I was hiding behind big rocks taking a pee and curiously observed funny things humans do. (So much for privacy!)

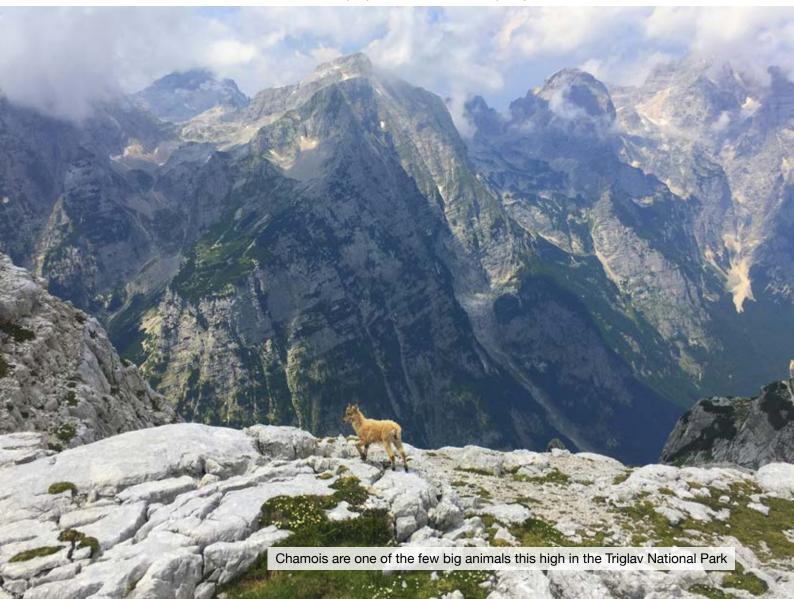


Location of Slovenia in Europe and world (top left) by NuclearVacuum





Map by San Jose, retouch by Hayden120, via Wikimedia Commons





Approaching Kredarica Hut

On Kredarica

Just as the weather started turning bad with thunder striking over five times within an hour, we were relieved to reach the Kredarica Hut. At the hut, the weather changed from sunny to cloudy with a strong wind and showers persisting all afternoon until night. We held off the summit until the next morning and set the alarm clock for 4.30am.

Triglav: to head for the summit or not?

Although the weather did improve overnight, it was far from idyllic. With big thunderstorms quickly rolling in from Italy, our chances of reaching the summit were scarce and bound to that one shot in the early morning before running down to the Krma Valley, where we had left our second car. We headed for the summit at 5.10am and climbed almost to



This is not too bad. Miha, Jure, Mitja and I toasting to our great adventure

the top of the 140 metres smaller peak Mali Triglav (meaning little Triglav), when a small thunderstorm got so close we could hear its thunder loud and clear, while it also started raining. Between heading for the peak and safety, we chose the latter and returned to the Kredarica Hut to wait until the rain stopped.

Going down the Krma Route

At 6.20am it cleared up a bit and we set off to the Krma Valley to be past the exposed parts before the big thunderstorms finally arrived. Luckily, the Krma Route is easy with no steep climbs, which allows a quick safe retreat if needed, plus a small bivouac Prgarca (purr-gahr-tsah) somewhere in the middle of the way that can serve as a shelter if need be.





Climbing down Mali Triglav to Kredarica Hut

We were in a hurry and could actually be down in less than three hours without stops, but one member soon started experiencing aches in his knees, so the descent extended to four hours, with the last hour walking in the rain. But just as the thunderstorm escalated to a full 10 on a scale from 1-10, we entered a local restaurant Psnak, ordered hot tea and a mushroom soup and toasted to a weekend well spent and yet another awesome adventure in Slovenia's spectacular Alps.



See how the conditions turned out for hikers ascending Krma at Vertical Adventures Slovenia. All I can say is *Good luck*!

As they say, the mountain can wait.



Neja is an adventurer, a dreamer, an explorer. A real mountain enthusiast. A blogger. When not on a dusty trail and exploring great peaks, she loves sharing the adventure with her readers. Check out her blog Exploring Slovenia. She is also on Facebook, Twitter and Instagram.

This article was first published at Exploring Slovenia's Triglav North Face on 28 June 2017. Check out the stunning photos.

Miha and Mitja on their way up the Prag Route, Triglav, Slovenia Neja Fidler Pompe A AM AL THE MAN

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Hard Man Bush Walker Colin Gibson

This poem is in a book A Wild Blue Wander.

When the strangling scrub has you by the neck And you're dangling like a suspended wreck With your body bruised, your clothing torn, And you curse the day you were ever born, For your strength is sapped and your mind's a mess And you scream out loud in the wilderness: "If I died right now I could not care less!" Look, don't be such a knocker ... Behave like a dignified hard man bush walker.

When you're cold as ice and the zipper's jammed And your bags are wet and the tent is crammed With a mess of gear and assorted odds Such as water pools and profaning bods, And the storm's set in for a week or more And a creek is running beneath the floor Till you cry out" "God, I can't take no more! Life has dealt me one helluva shocker!" ... Remember this: you are a hard man bush walker.

When the track is mud and each hidden log Is designed to tip you into the bog, There to writhe, revolve and curse and spit Like a fly submerged in a lump of shit; And its hailing hard and the scrub's thick-packed, And survival's odds against you are stacked When you realise: "I have finally cracked!" Look, (unlike a stereotypical ocker) ... You must hold to the way of the hard man bush walker.

When the loggerheads wield their screaming saws And bulldozers are frothing at the jaws, When the government's waffle and verbal spew Has sadly disillusioned you; When the bush you knew so alive and deep Comes crashing down in a screaming heap And you cry out: "God it makes me weep, The world is off its rocker!" ... Stop. Be as the proverbial hard man bush walker.

When you've lived a life full of storm and flood And have earnt your years with sweat and blood, Take time to think, look back, be glad And admit it, yes, it was not that bad; Though your breath is weak and you're fading fast How relentlessly do the seasons pass – When suddenly you are free at last And away you will fly, to where? Who knows? Not I ... And – like the hard man bush walker you are – you will die. Colin is from Sydney and has his poems published by Greenaissance Books. The poems have thoughts and experiences of Col's explorations in NSW's Blue Mountains, the woodlands of Sydney's near south coast, the south-east forests and the rainforests of north Queensland. The main website is Greenaissance. See also Bushwalker magazine.

Gold and white North-north-west

Photo Gallery

Looking north from St Patricks Head MJD

Competition: Tasmania September 2009

BWA Photo Competition

Other States August 2016

WINNER



Enchanted Snowzone

The Mount Stirling summit tree is an icon. Estimated to be around 400 years old, it somehow manages to survive the harshest of conditions to continue giving joy to all that visit. It truly is an enchanting scene.



Rockin' at Wyangala landsmith



Sundown approaches at the lakes John Walker



Bathtub Creek Brian Eglinton



Tasmania August 2016

WINNER



And so, we bid a fond farewell to the light ... North-north-west



Winter trails Cameron Semple

Everyone goes to Bay of Fires, fewer bother with Humbug Point, which suits me just fine. Dawn and dusk at Skeleton Point make for wonderful photographic opportunites, and the five minute walk means even I have no excuses for not taking the tripod.



Rainforest, Mt Fortescue Peter Grant



Landscapes August 2016

WINNER



After moving to Hobart in early 2016, capturing an Aurora Australis image was high on my list. This shot taken from the Cape Tourville Lighthouse at Freycinet was my first decent capture, and what an amazing place for it.

Aurora over Freycinet Cameron Semple



Up the valley North-north-west



A narrow passage AJW Canyon2011



The Pole, the Candlestick and the Cape casting shadows Peter Grant



Mt Hayward Brian Eglinton



Granite country landsmith



Enjoying the view John Walker

To see the all the entries check out http://bushwalk.com/forum/viewtopic.php?f=22&t=24111



Non-landscapes August 2016

WINNER



Hanging on Brian Eglinton

Hidden off the Heysen Track north of Aroona Hut is Bathtub Creek. It is typical of Flinders Ranges gorges, with bright coloured rocks and plants clinging desperately to whatever soil and cracks they can find. My friend pointed out this spindly tree high above us. It had probably got established in a crack and eventually grew to the point of splitting the rock apart exposing its roots to the air.

Another aspect of the "bones of the earth" that appeals in the Flinders.



Red browed finch landsmith



Sunrise, Munro Bight Peter Grant



Glowing, Fingal Beach Lorraine Parker



Frosted remnants of autumn North-north-west



Frozen Gums Maree Semple



Standing the test of time John Walker



Other States September 2016

WINNER



Sunrise on Wonaka Hill Brian Eglinton

After three days exploring in the Heysen Range, we stopped over at Rawnsley Park near Wilpena Pound. My friend was not an early morning type, but being challenged, we both climbed the nearby ridges for all-round views at sunrise.

In the Flinders, the air is normally crisp and clear on winter mornings. So as the many ranges of orange quartzite in view were starting to glow in that special morning light, I was able to get a distant view of Wonaka Hill, many kilometres to the south. A common, but special sight in the Flinders.



Springtime Apsley landsmith



The charisma of Uloola John Walker



After the Storm - Second Falls Beardless



Tasmania September 2016

WINNER



Rockin' on North-north-west



The Pipes Cameron Semple

Walking 4WD tracks can be a pain, but sometimes they're worth it. Climies, between Trial Harbour and Granville Harbour, is my favourite. It runs through open heath and sedgeland, with the mountains on one side and wild coasts on the other, and massive granite boulders mushrooming out of the ground. Sunshine is a bonus.



Landscapes September 2016

Some places just can't live up to the hype; others give far more than expected. Mt Agnew was one of the latter. There's a bit of everything on the climb, and the conditions that day also had a bit of everything - fog, wind, rain, sleet and even snow flurries, with patches of brilliant sunshine and rainbows below me. It's the sort of thing you learn to

expect on the west coast, but it's still breathtaking.

WINNER



Typical west coast weather North-north-west



Shoal Bay sunrise Cameron Semple



Rawnsley morning Brian Eglinton



Xanthorrhoean delights landsmith



Waterfall abseil AJW Canyon2011



The ephemeral Hazel Falls John Walker



Non-landscapes September 2016

WINNER



Capturing an image of a wombat is usually a thrill in itself. However, on Maria Island the number of wombats is so high that I had to set the bar higher. As we walked along the beach near Encampment Cove this gorgeous creature casually wandered down for a drink in what must have been a fresh water soak in the dunes. Such a privilege to see.

Drinks break Cameron Semple



Striated Pardalote landsmith



Backlighting North-north-west



Here's looking at you kid Brian Eglinton



Spring wattle John Walker



A nice day in the sun AJW Canyon2011



White water Beardless



First Aid Kit What to Carry and How to Carry It Matt McClelland

SENT

There are some bushwalking topics we will never agree on. There is never going to be the perfect gear list, the best footwear or most ideal shelter. So as I write this article about what your first aid kit should look like I do so from a bunker buried deep in the earth with the expectation it will never be safe for me to surface again, rest assured, the bunker is equipped with a very adequate first aid kit.

The most critical part of all first aid kits

The absolutely most important part of first aid does not fit in a pack. It is having a good practical working knowledge of first aid, its principles and rationale.

The third person I found unconscious was laying on his front, but in all the first aid training and books the casualty was always lying on their back. It's embarrassing how confusing that was for me at the time. People never injure themselves as the book or instructor says, so do not learn just what to do, understand the principles and why we do it. Understanding why means that we can improvise and deal with unusual situations and priorities them. When I studied to become a first aid instructor I read The rationale of first aid by St John Ambulance Australia, and it was a great leap forward for me. (The fourth person was in a seat.)



First aid is the assistance we provide to a sick or injured person until full medical management is available, if required. As first aiders our role is primarily to prevent other people (including ourselves) from getting injured or sick. It is mostly about experience and knowledge not gear. This is why first aid course have standard protocols such as DRS ABCD to make it easier to remember the most important things first.

If you have a good understanding of first aid principles, and you have a calm head then it is much easier to improvise and take care of the situation well - even with no first aid kit. A first aid kit is simply a tool that helps us step up the level of care a few notches. This stepping up is often very worthwhile, for example being able to reduce the risk of infection or use of medication to help serious medical conditions. The kit alone does nothing.

It is not just blood and guts

Okay, before we get into the actual first aid kit, please allow me a small soap box rant. First aid courses rarely covers mental health first aid. This is a real issue and I hope that this area of training will become more common in the future. The are two core streams:

- Helping people after an emergency, psychological first aid (similar to crisis counselling), and
- Psychosis First Aid that helps people experiencing the onset or increase of mental health issues.



This kind of first aid may be less glamorous than dealing with blood or broken bones, but done well it can have an enormous positive impact on the person's life and the outcome of your bushwalk. As first aiders it is helpful to be trained in psychological first aid for our own wellbeing; we need to take care of our own health.

Why do we even need a first aid kit?

Now don't get me wrong here, it is not just knowledge and experience, and I encourage you to carry a first aid kit. In some situations, a few simple items can save people's lives, like an allergy or a heart attack. Other items buy you a lot more time for help to arrive, like bleeding or snake bite. Small items allow you continue your adventure, such as blisters, small cuts or burns.

There are a bunch of factors such as terrain, length of walk, isolation, weather, and group size that will impact on the items and number of each item you carry. Possibly the biggest impact will be how you perceive the duty of care you own to people in your group and yourself. Duty of care is simply a moral and potential legal obligation to ensure the safety and well-being of others. Yes, it is possible to do the minimalist thing and manage a wound with toilet paper and leaves, but when you think through your duty of care you can decide if that is actually what you want before you leave home. Consider the consequences of specific injuries/illness occurring and the gear required to manage them adequately. Consider the probability of such things happening, and how you would feel if you did not have the gear.

Suggested list

Helen Smith and I on a project at National Parks Association NSW decided to make up a set of first aid kits up for bushwalking leaders. We made our own because we needed a lot of them and the ones in store just did not cut it for us. For most of us bushwalking types, I think the way to do it is to start with a good kit that has the contents and casing that suits you then add and remove from there.

Keep in mind this list was created for club group leaders, so it has been designed to cope with various conditions, larger and diverse groups of people.

Personal medications

There are some first aid items that people in your group may carry themselves. Such as medications for allergies, asthma, heart conditions and much more. Hopefully along with the medication they will have an action plan that outlines the process of managing the condition if it fairs up. Speak with them about it and know where it is in their pack.



Personal protection

- 4 rubber gloves, medium size
- 1 CPR face shield
- 1 alcohol gel hand wash

Injury and bleeding management

20 adhesive bandages (various shapes and sizes)

1 spare gauze pads

3 sterile non-stick compresses 2 x 7.5x10 cm. 1 x 5x7.5 cm

- 2 triangular bandages
- 2 elastic roller bandage
- 1 Moleskin™
- 1 Steri-Strips™
- 1 hypoallergenic tape

1 zinc oxide tape: securing dressings, strapping and repairs

Wound cleaning

- 5 Burnaid[™] burn gel
- 5 chlorhexidine wipes
- 10 ear buds
- 2 saline squeeze vials

Information

First aid booklet

Pencil & paper

Group contacts and medical details

This is a good reminder to us all, let people in your group that you trust know what medical issues you have and how to manage it in an emergency.

But what about ...?

Yes I can hear you screaming, but what about ...? If you want it, add it. How far do we take this is always going to be a question. Should we carry oxygen cylinders? A semiautomatic defibrillator? Splints? Stretchers?

Hardware

1 trauma shears: removing clothing, packs and shoes

1 tweezers: removing splinters, stings and other foreign bodies

3 splinter probes: removing splinters

1 small torch: night emergency backup & neurological pupil assessments

5 safety pins: general gear repairs

Medications

6 Panadol™: pain relief

6 Ibuprofen[™]: pain relief

6 Aspirin[™]: pain relief, possible use for management of suspect heart attack

3 Gastrolyte[™]: to help with rehydration and replacement of electrolytes

Also carry a copy of the medicines instructions

Emergency management

Whistle: for attracting attention and regrouping

Bike tube pieces with frayed edge: emergency fire starters

Gas lighter: emergency campfire lighter, sterilising metal

Micropure: water treatment for ten litres

Space blanket: keeping warm, preventing hypothermia, managing shock

PLB or other emergency communications device for when out of mobile coverage

Maybe, consider vulnerability in your group, costs, weight etc. Think about what is normal and what most other people would do in a similar situation. Think about stuff going bad and how you would cope without having it. You can't carry a full emergency room with you - our backs are just not strong enough, so there will always be compromise and that is okay. It is not normal (yet) to carry a defibrillator on a bushwalk, when they become as small and cheap as your phones then I suspect they will be added to our backpacks. The first aid kit will always be changing as technology, medicine, communication and transport improves.

How to pack it

It seems that most walkers have a first aid pouch and pack it near the top of there pack. Usually the PLB is separate. This works, I do things a little different. I have 2 first aid kits as well as a bandage and PLB separate. Let me explain.

- **PLB**s need to be handy, but not the first things you grab, so it lives in the main section of my pack.
- I carry a roller bandage in snap lock bag in an outside mesh pack pocket. I just find if I need anything from my first aid kit is almost always a roller bandage, usually for a minor strain or sprain. I keep it handy for that reason. It also quick and easy to access in case of a snake bite, or major bleeding.
- **Oh crap! Bag**. My first aid kit is for those moments when someone shouts out. Maybe a trauma kit would be a better

name, but I prefer mine. This is a clear vacuum sealed back (or just suck the air out of a snap lock bag) with triangular bandages, shears, gloves, shock blanket, etc. Basically stuff to help when someone has likely in a lot of pain or at risk of bleeding out quickly. This bag rips open quickly and hardly ever gets used, but sits at the very top of my pack.

• Oh yeah! Bag. This is all the other stuff in the main first aid kit list. It is the part of the first aid kit that gets the most use. It is for dealing with the small stuff, before it become big and ugly. For blisters, small cuts etc.

Getting help

Remember that first aid is mostly about buying time before medical aid can be accessed, and avoiding things from getting worse. For most minor issues you can visit a doctor after you finish the walk, if you need to all. Occasionally someone in your group, or someone you find on the track may need medical aid urgently. In situations such as a heart attack, stick in the eye, significant bleeding, severe allergic reaction the faster you get help the more likely the person will survive as well as have a faster and better their recovery.



You do not want to be in this situation wishing you had a way of contacting help and not been able to. Mobile phones are the best tool, when they work. Use the Emergency+ app to make the call and know your location. When you are out of mobile range then I recommend a PLB. Check out my article on Wilderness Communication for more on this topic.

Potential improvisations

There are many things in your pack, on your body and around you in the bush that can be used to help with first aid. It is a probably a whole article in itself. It is worth considering what you already have in your pack that can be used. For example:

- A sleeping mat can be used to keep a person comfortable it can also be used as a splint or as a (not very good) stretcher to help move someone a short distance if needed.
- I have used a space blanket/tarp to splint a broken lower arm effectively.
- When my son broke his lower arm, he was holding his arm across his tummy,

instead of going through the trauma of opening the first aid kit we were able to make him comfortable just by lifting the lower part of his shirt over his arm and holding it for the drive to hospital.

First aid by remote control

A last little tip before we finish. Good first aiders are take control of a situation and making good stuff happen. Great first aiders take control, keep things calm and instruct people to do stuff. If the injured person can safely help, then ask them to. They can clean their own wounds, and put on band aids. Asking people to do their own first aid, under good clear instruction, means you may not need to touch them at all, reducing your exposure and their risk of infection. It helps keep people calm, may even reduce their pain. It helps you be more situationally aware of what is going on around you, allowing you to deal with several injured people at the same time. It also helps improve the dignity of the overall experience and helps people learn new skills from you.

Chat online

694

To discuss the topic visit the Bushwalk.com forum and learn some more.



CanTeen Katie Badger

CanTeen supports young people aged 12-25, who are affected by cancer – whether it's their own diagnosis, a parent or sibling. CanTeen's mission is to be in the corner of every young person when cancer crashed into their world. They provide practical and emotional support tailored to the needs of young people and offer them the chance to connect with others who are in the same boat.

Big smiles all around for the Hike the Light finishers at Wilsons Prom

Between September 2017 and April 2018 CanTeen is running a national series of bushwalks that will challenge participants to race the sun! The Hike the Light series is in a number of Australian states where people are invited to walk these beautiful routes beginning at sunrise and finishing by sunset the same day.

These unique events are in some of the most picturesque parts of the country, beginning at sunrise and finishing by sunset the same day.

offering walkers the chance to take in the stunning scenery of the Blue Mountains National Park, explore the wild coast of Wilsons Promontory, climb Australia's highest peak in Kosciuszko National Park, enjoy the breathtaking scenery of the Freycinet Peninsular or choose an urban hiking option on the Gold Coast Oceanway.

All the Hike the Light walks are capped at a maximum of 30 participants creating a small, close-knit team of walkers coming together to raise much needed funds to help transform the lives of young people living with cancer.

CanTeen Members like Darren can tell you how the wonderful services CanTeen offers helped him cope with the death of his mother.



View over Wineglass Bay in the stunning Freycinet National Park

"I have been so fortunate that I have been able to take advantage of the range of services and opportunities which CanTeen has given me. I was also happy that I got to meet a wonderful counsellor who was empathetic while I explained many of the challenges I faced after my Mum passed away, and was able to provide me with compassion, coping skills and the direction needed for me to feel confident fulfilling my goals and aspirations in life."

Hike the Light trekkers will be able to learn first-hand the difference they are making as they trek alongside inspirational young people like Darren, taking on the challenge together.



For details on all routes or to take on the Hike the Light challenge please visit Hike The Light for more information and to register.

On registering you will be invited to your

Hike the Light event on a Friday evening for the event briefing and welcome dinner. You will then be up bright and early the next day



to take on your sunrise to sunset walk. On finishing, you will then be treated to a welldeserved end of event celebration evening before a second night's accommodation and farewell breakfast the next morning.

The routes range from 27 kilometres to 36 kilometres, depending on the difficulty of the track, offering a mixture of traditional bushwalking terrain with a more coastal urban hiking option. So, whether you're an avid bushwalker or a bushwalking newbie, the CanTeen Hike the Light series has something for everyone and we would love to have you on board!

Please note: Registration fees and fund raising targets apply on all walks.



Wilsons Prom Eastern Circuit

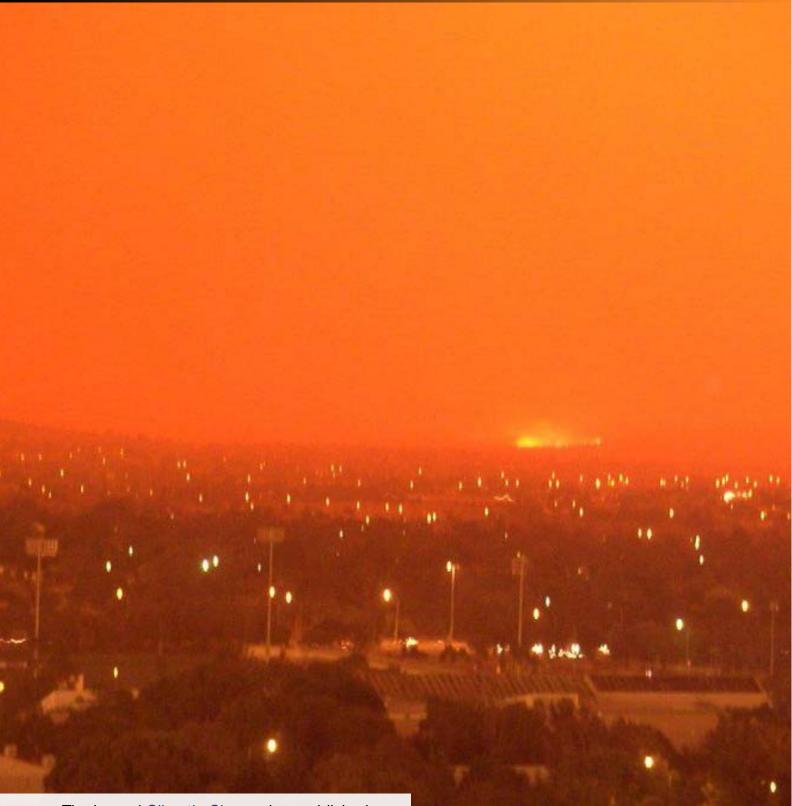
As a special early bird offer – all Bushwalk Australia readers get \$50 off their registration fee just enter discount code HTLBA1 at the checkout.





Kosciuszko and Abbott Range skyline John Walker





The journal Climatic Change has published a special edition of review papers discussing major natural hazards in Australia. This article is one of a series looking at those threats in detail.

2003 Canberra bushfires Paul via Wikimedia Commons Fire has been a driving force across Australia for millennia. Indeed, the health of many of our ecosystems is intrinsically dependent on fire. But bushfires are also one of our most frequent natural hazards, with a total cost estimated at A\$340 million per year.

In the past decade or so, extreme bushfires in southeastern Australia have burned more than a million hectares, claiming more than 200 lives and over 4,000 homes. Similar losses in other major urban areas have prompted questions about whether we are seeing a shift towards a significantly more hazardous fire regime, characterised by increasing fire frequency and intensity, and the development of catastrophic "firestorms".

While these extreme bushfires account for only a very small percentage of fire events, they are responsible for the lion's share of bushfire-related losses.

In contrast to typical bushfires, which spread across the landscape as well-defined burning fronts with smoke plumes perhaps a few kilometres high, extreme bushfires exhibit deep and widespread flaming and produce smoke plumes that can extend 10-15 kilometres into the atmosphere. At these altitudes, bushfire plumes can actually develop into thunderstorms (hence the term "firestorm"). As such, extreme bushfires become much more difficult for emergency services to handle, making them all but impossible to suppress and their spread difficult to predict.

Beyond hot, dry and windy

Like other dangerous bushfires, firestorms are driven by hot, dry and windy weather. But to spawn a firestorm, a range of other conditions must also be met; these

can include a rugged landscape, particularly nasty weather events that produce "spikes" in fire danger, and conditions in the upper atmosphere that allow fire plumes

... extreme bushfires exhibit deep and widespread flaming and produce smoke plumes that can extend 10-15 kilometres ...

to grow to considerable heights.

While previous studies have considered past and projected changes in the hot, dry and windy aspect of fire danger, less research has been done on the future projections for these other types of conditions. This means



that we have quite a poor understanding of how extreme bushfires might affect us in the future.

As part of a series of reviews produced by the Australian Energy and Water Exchange initiative, my colleagues and I have taken a closer look at the most catastrophic bushfire cases and the factors that drive them, beyond the usual hot, dry and gusty weather.

There has been an overall increase in the frequency of major bushfire events in southeastern Australia since the mid-19th century. In particular, in the past 15 years a major fire event has occurred every five years or less. While some of this increase is

due to changes in land use since European colonisation, there is also strong evidence of climate-driven changes.

We found that besides increases in dangerous surface fire danger conditions, upper atmospheric conditions have also become more conducive to explosive There has been an overall increase in the frequency of major bushfire events in southeastern Australia since the mid-19th century.

fire growth. High levels of the c-Haines index, which signals greater potential for a fire's plume to rise high into the atmosphere, have become considerably more prevalent since the 1980s. The effects of droughts and widespread heatwaves have also contributed to the occurrence of extreme bushfires.

Looking into the future, high c-Haines values are projected to grow more prevalent still, albeit more gradually than over recent decades. Frontal weather patterns associated with particularly bad fire days are also projected to become more frequent during this century, and rainfall is projected to decrease over southwest and southeastern Australia.

All of this suggests that extreme bushfires will become a more common occurrence into the future.



What we still don't know

Our methods for assessing fire danger do not explicitly account for the effects of extended drought and heatwaves on larger fuel elements such as branches and logs, and so may not properly account for their effects on fire spread and heat release into the atmosphere.

There is also considerable uncertainty about how fuel loads will change into the future. It is possible that the higher fire intensities expected to result from the direct effects of a warmer, drier climate may be offset by lower fuel loads.

Our understanding of extreme fire occurrence is also hampered by the lack of long-term and prehistoric climate data, which makes it hard to work out what the "normal" level of extreme bushfires has been in the past. While charcoal records show promise in this regard, we still don't know enough about how charcoal is generated, deposited and subsequently preserved during extreme fires.

To predict the future occurrence of extreme bushfires, we also have more work to do in understanding how the trends forecast by global climate models will play out in terms of creating regional-scale fire weather conditions. And we still need to figure out the likely effects of other large-scale patterns such as El Niño.

Given the relatively recent advances that have been made in understanding the key drivers of extreme bushfires, the field is now ready for targeted studies that will help us estimate the future risk of extreme bushfires – and how best we can confront the threat.

Jason Sharples

Associate Professor, School of Physical, Environmental and Mathematical Sciences, UNSW Australia, UNSW

The article was first published in The conversation (an independent source of news and views, sourced from the academic and research community and delivered direct to the public) on 10 November 2016.

In the News

Overland Track boom



Overland Track view of Mt Olympus - ILUVSWTAS

More than 2000 bushwalkers have booked their walk on the Overland Track in two weeks after the start of booking. The week after Christmas is already completely sold out.

Bureau of Meteorology (BOM) staff are on strike

After being locked in an ongoing dispute over pay and conditions for three years, around one third of BOM staff went on strike for three weeks.

Freeway through Royal National Park

The NSW government is considering acquiring 60 hectares of the Royal National Park for the proposed F6 Extension between Sydney and the Illawarra.

Bushwalker falls to her death in the Glass House Mountains

A woman fell off a cliff while walking on the popular new track on Queensland's Sunshine Coast, the Mount Ngungun summit track.

Lost and found

A couple went missing along the Florabella Pass in the Blue Mountains. After a cold night out they managed to find their way back to safety.



15 Things You May Have Never Known About Dehydrating Foods

Sonya Muhlsimmer

own

shydrator

So you know what drying is right, it is the physical removal of water. Simple really, but is it simple when it comes to drying food? Well, there are a few methods of drying and a bit of science involved, so let's talk about drying and dehydrating foods.

Chicken prepared for dehydration

- 1. Sun drying is the oldest known type of food preservation and is still used in many parts of the world. It is a slow process and relies on the elements, taking up to four days to dry some fruit. You need to have a certain high temperature and low humidity for this process to be successful.
- 2. Sun drying will dry food up to about 15% moisture content. This moisture content is okay for some food items, such as dried fruits and sun dried tomatoes, but not all. At that moisture level, bacteria, yeast and mould can still grow.
- 3. Micro-organisms get their water from food in which they grow. Bacteria and yeast require moisture to grow, whereas mould requires moisture to grow, but not as much. Drying food can inhibit microorganism growth.
- 4. When you dry your own food at home it may not reach the low moisture content as the shop-bought food. Commercial driers have different equipment and stringent quality checks. For example, water activity (Aw) is monitored to ensure the moisture content is at a specific level, so no micro-organisms can grow. I doubt that you would have an Aw meter at your house to check the moisture content.



Mushrooms before dehydrating ...

- 5. Dehydration refers to an artificial drying under controlled conditions, which removes nearly all the water from food. The final moisture content of the food is about 1-5%.
- 6. The basics of dehydrating foods are to heat the food with a dry, circulating air source to absorb and carry the moisture away. The time taken depends on the water



content of the food, the size of food pieces, the humidity of the room, the rate of circulating air, the temperature of the dehydrator, and what method of drying you use.

- 7. Some foods need to be treated before dehydrating. Blanching vegetables kills off those natural food enzymes present and micro-organisms that can create off colours and flavours. Thoroughly cook meats, or entire meals before placing them in the dehydrator. Do not try dehydrating fatty foods or dairy products - they will go off quickly.
- 8. Make sure when preparing your food you cut, slice or dice them as evenly as possible. This will enable the drying time to be consistent with every piece.



- 9. Dehydration can be done by two ways. One is oven drying, well you guessed it, an oven is used for this process. Who would have guessed? This is a simple and long process, about six to eight hours, and the oven needs to stay at around 60-70°C. This process works okay, but it uses more electricity than bench top food dehydrators.
- 10. The other method the bench top dehydrator - is easy to monitor regarding temperature, humidity and drying time as they are specifically designed for the purpose, rather than an oven.
- 11. Dehydrated foods are hygroscopic, which means they absorb moisture from the air, and each food has its own equilibrium relative humidity. This is the humidity at a given temperature at which the food will neither lose or pick up moisture from the atmosphere.
- 12. Conditioning is "equalising" the moisture, helps prevent mould, and should be done to fruit before you storing. Once dried and cooled, loosely pack the fruit in glass jars or plastic bags and let stand for about a week or two. Shake the food daily to check for condensation or moisture. If moisture is seen, dehydrate it again.

- 13. Dried and dehydrated foods should be stored in air-tight containers, preferably in the kitchen pantry. As explained the food absorbs moisture from the air. Check the jars occasionally to see if they are still dry. If the food has gone mouldy, throw it out. You can freeze the dehydrated food for a longer shelf life, but if not wrapped carefully it can suffer freezer burn. It is still okay to eat.
- 14. The shelf life of dehydrated foods can range from a few months to a few years; it depends on the storage conditions and water content; the higher the water content, the shorter the shelf life.
- 15. The nutrient and sugar content will become concentrated in dried and dehydrated foods, so the flavour may be stronger. Also, vitamin A and C can be lost in the pre-treatment and dehydration processes.

Just for the record, freeze dried foods are significantly different to dried or dehydrated foods. Freeze drying is a process called sublimation and is a very high-tech process. The food is dried to around 1-2% and lasts for many, many years. You can't do this process at home.



This table shows the weight difference between food just prior to and after dehydrating.

Food	Weight after cooking or raw grams	Weight after dehydrating grams
Steamed veggies	296	38
Garlic and onions	86	16
Mushrooms	109	10
Chicken	144	59
Sausages	318	135

EGGIE

One very last thing, if you are concerned about fires occurring on your bench top

by leaving your dehydrator on for long hours at a time, either raise the dehydrator on blocks of wood or put the dehydrator on a metal surface (like biscuit trays). So now you know nearly everything

You can freeze the dehydrated food for a longer shelf life, but if not wrapped carefully it can suffer freezer burn.

about dehydrating, oh and did I mention it is way cheaper than buying pre-packaged dehydrated foods ... go on, get shopping for a dehydrator and get in that kitchen and start dehydrating your meals.

Many thanks to my friend Steven Buchert for the dehydrating photos and weights.



VEGGIES

Sonya Muhlsimmer



Before I warm you up with some real comfort food, I want to share some serious stuff with you. A friend recently took me to a place close to my home that is under threat from coal mining. This special place is Ben Bullen State Forest, in the Gardens of Stone, near Lithgow in NSW. There are massive sandstone cliffs, pagodas to climb, swamps, natural arches, canyons, waterfalls, Aboriginal rock art and dozens of threatened native plants and animals. It is a Mecca for bushwalkers - you have to see it to believe it. Wow what a place, it really is something, well it is Sydney's equivalent to the Bungle Bungle Range.

Unfortunately, this area is unprotected and not part of a national park. Now my friend and his small army have fought long and hard and have managed to preserve some sections from mining already, but there is still a fight on their hands and they need our help. Visit the Colong Foundation for Wilderness pages or Gardens of Stone campaign and become a Gardens of Stone Protector, and get out there and explore the area. Seriously, you need to visit this place, it will make you want to jump for joy. Then once you have explored this amazing place, helped protect the area, sit back, warm up and eat some soul food, did you know soup is the perfect winter warmer?

Gardens of Stone heaven Emanuel Conomos

Chicken Noodle Soup

Now, who does not like a good soup on a cold winter's night? There is something about soup that warms the soul and body right through. And throw in some hot bread and you have a winner. There are old wive's tales about chicken soup, and now there are quite a few myths of why chicken soup is good for colds and flus available on-line for you to read. I will leave that up to you to research and decide ... believe what you will. I believe this is a winter warmer dish not to be reckoned with. It is a super easy (some would say souper easy) and quick to make.

At home preparation

For the vegetarian option break the tofu up into small chunks. Label bags and place all ingredients into the allocated bags. Copy or print out Method at camp and keep together with the bags.

Method at camp

In a pot add 2 cups of water and add the contents of Bag 1 (vegetable mix).

For the vegetarian option: Soak bag 1 (vegetable mix) for a minimum of 15 minutes or until the tofu changes to a lighter colour. After the soaking time bring the pot to the boil and cook for 3 minutes, add the noodles (Bag 2) and cook for two minutes.

For the chicken option: Bring the pot to the boil, now add Bag 2 (noodles) and the chicken.

Cook for 2 minutes, serve and enjoy.



Bag 1 (vegetable mix)

Fried shallots	2 Tbsp	12 grams		
Dried bamboo (optional) or		10 grams or		
freeze dried corn	1 Tbsp	4 grams		
Lemon pepper	1 tsp	4 grams		
Chicken stock	½ tsp	3 grams		
Dried parsley	½ tsp	1 gram		
Mixed peel	½ tsp	1 gram		
Dried onion	¹ / ₈ tsp	1 gram		
Dried garlic	¹ / ₈ tsp	1 gram		
Bag 2 (noodles)				
Ramen noodles	1/2 bunch	45 grams		
Bag 3 (chicken)				
Chicken	1 tin	85 grams		

Water - 2 cups for preparation

Vegetarian option - Bag 1 (vegetable mix)

Dried tofu		10 grams
Vegetable stock	½ tsp	3 grams

Miso Soup

Miso means "fermented beans" and is a Japanese favourite. Miso is very good for you too. It is believed to stimulate digestion and energise the body. How does a Japanese soup do that? Due to the microorganisms used for the fermentation process. Aspergillus oryzae (a type of mould) is added to rice and left to ferment. This fermented product is called koji. This koji is then added to soybeans and again allowed to ferment. The fermented product can be thought of as a "pre-digested" product, in other words the food is somewhat broken down so your gut does not have to work that hard to digest the food, thus aiding (or stimulating) the digesting process, and micronutrients are also absorbed much quicker. Miso is rich in antioxidants, minerals, vitamins and complete protein source. Not only does it warm you on a cold winter's night, it is good for you and easy to make. Go on, grab a bowl.

At home preparation

Break up the dried tofu and TVP beef slices into small chunks. Label the bag and place all ingredients into the allocated bag and container. Copy or print out Method at camp and keep together with the bag.

Method at camp

Add the contents of Bag 1 (miso mix) into a pot and add 3 cups of water, soak for a minimum of 15 minutes. After the soaking time, add the sachet of miso powder into the pot and stir through. Put the pot on the heat and bring to the boil then simmer for about 5 minutes.

Remove the lime leaf and pour the soy sauce in. Serve.





Bag 1 (miso mix)

Brown sugar	1 Tbsp	17 grams
Dried tofu		15 grams
Fried noodles	1⁄4 cup	15 grams
Soy grits	1 Tbsp	15 grams
Fried shallots	2 Tbsp	12 grams
TVP beef slices	6 each	10 grams
Dried mushrooms	½ cup	7 grams
Ground ginger	¹∕₄ tsp	1 gram
Dried onion	¹∕ ₈ tsp	1 gram
Dried garlic	¹ / ₈ tsp	1 gram
Lime leaf	2 each	1 gram
Ground chilli	few pinches	
Salt, pepper	few pinches	
Sachet (miso)		
Instant miso	1 sachet	10 grams
Water - 3 cups		
A substation and		

Container						
Soy sauce	2 tsp	12 grams				
Meat option - Bag 1						
Crispy pork floss	2 Tbsp	15 grams				





- Best of AC1 ACT's best walks
- Gardens of Stone
- **Keep Your Cool** Total fire ban day Sports drink

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Bushwalking tracks



2 weeks in Fiordland