# Bushwalk

**Mountain Musings** 



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Always Was Always Will Be Aboriginal Land

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





### Editor's Letter



Hi.

I hope this edition finds you well.

I trust you enjoy the Bushwalk magazine as much as we love producing it. I am super excited that this magazine finally has a brand new home. At bushwalk.com/magazine you can now easily read any edition online or download the PDF. You can easily browse articles by edition or discover articles by the author, topic or location. After almost 10 years, you will find nearly 750 articles from members of our bushwalking community about specific walks, gear, food, environmental issues, and so much more.

In this edition, get ready as Helen and Geoff take us along the stunning Thorsborne Trail on Hinchinbrook Island. Sonya takes us to her dream destination in New Zealand and lets us in on the mishaps along the way. Damian and his Crazy Danger Crew explore the Brindabella Ranges on a hunt for snow. Ian takes us to the other side of Halls Creek, Western Australia, on a surprise trip among some extraordinary geological features. I get a bit carried away looking at why it is impossible to measure the length of a bushwalk perfectly. Lastly, we meet an endangered bird that can save entire ecosystems.

Happy walking and reading. meter Miller and

Matt:)

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Cover image Geoff enjoys meditative views from Nina Peak Helen McKerral

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Please send any articles, suggestions or advertising enquires to Eva. We would love you to be part of the magazine. Read our Writer's Guide to get started, and we are here to help.

#### Declaration

The opinions stated in articles are those of the authors and not of those involved in the production of this edition. If you are worried about transparency or any editorial aspect please either write to me or raise the issue on Bushwalk.com. The bushwalking community is a small world and paths often cross. To improve transparency I thought it would be helpful to list my main associations within the outdoor community.

I operate Bushwalk.com, Wildwalks.com and Overlandtrack.com, a number of other smaller websites (and related apps) and have written several walking guide books, published by Woodslane. I contract to National Parks Association NSW and I am a member of the Walking Volunteers. I have had contracts with state and local government departments regarding bushwalking and related matters. I have also partnered with a large number of other organisations in environmental campaigns. Any commercial advertising or sponsorship will be clear in the magazine.

#### 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 Bushwalk magazine.

# Bushwalk Magazine New Home

Text
Matt McClelland

Our favourite bushwalk magazine has finally found a place to call home, with lots of new features.







Bushwa

e got busy building a much more user-friendly and flexible website. It looks tons better and can do so much more. You can still download the PDF and EPUB files, but you can also:

- Read it online with a flip book reader.
- Read and share single articles as a webpage.
- Find articles based on edition, topic, author or location.
- Easily find and read past editions and always know where the latest edition is.

# Meditation and Memories on the Thorsborne Trail

**Text Helen McKerral** 

**Photos** 

**Helen McKerral and Geoff Fisher** 

Why do we hike? The reasons are many but, for Geoff and me, two trump all others. It's not speed and distance - in our sixth decade, any distance is satisfying! It's not social media likes, though we aim to inspire other leisurely folk with our website. It's not for mental health per se, although being outdoors is undoubtedly beneficial.



Infinity pools at Zoe Falls



Swamp between Little Ramsay Bay and Zoe Bay

or Geoff, multiday hiking is about immersion in landscapes that you can reach no other way. After decades of meditating, he also practises walking meditation, being wholly present in landscape. For me, although photography and botany are passions, hiking is about creating lifetime memories so, when friends invited us to join them on the Thorsborne Trail, we jumped at the chance.

The trail is an exceptional 32 kilometre hike on Hinchinbrook Island (Bandjin country) in tropical north Queensland. The entire island is an uninhabited national park, with hiker numbers capped to preserve its serenity.

Because Hinchinbrook is mountainous, we not only experienced empty beaches and rocky headlands, but also lush swamps, rainforest and estuaries. We rested on heathland peaks and saddles, and crossed rocky streams. We swam in clear pools with jungle perch nibbling our toes, while glorious waterfalls thundered down nearby. At night we camped amongst trees, usually within a stone's throw of the beach.

This trail is unique – in its wildlife, vegetation, variety and beauty.



The entire island is uninhabited national park ...

#### **Tips**

Our friends had successfully booked the competitive peak April-September season: summer/monsoon bookings are discouraged because people often can't complete the hike and require rescue due to flooded creeks or heat exhaustion. The track is short, but humid heat, rough terrain and lack of mobile coverage mean a PLB/Inreach, map, tide table and first aid kit are essential (see Planning and Tips for details). In poor weather, the trail is demanding at best, impassable at worst.

The recommended six day itinerary seems excessive, but this hike is more than walking: bring togs and goggles!



#### Day 1: Trail Head to Nina Bay, 5.4 km

We left early from mainland Cardwell to catch the tide with Hinchinbrook Island Cruises. Brad provided printed tide charts to correctly time estuarine creek crossings (saltwater crocodiles) and also clarified the (few) cell reception areas; he was pleased we were carrying Inreaches because he'd rescued numerous hikers.

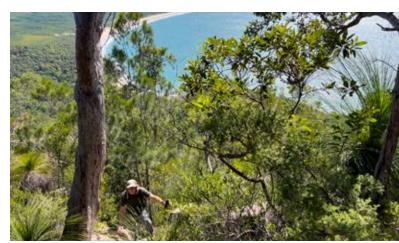
The boat ride flashed by with island tales; we spotted a turtle and the splash of dugites. Finally, we motored up an inlet, disembarked via a steamy mangrove boardwalk, and began our hike.

Almost immediately we traversed a shell-scattered beach, followed by lush jungle soft underfoot and alive with birdcalls and small scuttling things. Leaving our packs at a junction, we took day packs up the rocky scramble to Nina Peak. The humid heat made everything more challenging for southerners like us, but the spectacular views were worth our sweat.

Down we went and on to Nina Bay campsite. We were following the eastern/seaward coastline with no civilisation in sight, walking north to south so spectacular waterfalls were the climax of our journey.



Nearing the end of the beach



Climbing Nina Peak



Views from Nina Peak over inlets and mangroves

The campground is right beside the beach but, contrary to the Nim's Island movie filmed here, crocodiles preclude any swimming in that inviting aqua sea!

There is plenty to see around camp; arriving early means you'll have time to explore the rocky headland or find rockpools up the creek. However, because we were in the company of friends, we continued to Little Ramsay Campground where they were staying two nights. We've structured this article to reflect our recommended leisurely itinerary for days 1 and 2.

## Day 2: Nina Bay to Little Ramsay Bay,

This short distance comprises more beach and forest, as well as fun but slow rock-hop Boulder Beach; high tide would be tricky. Much of the Thorsborne is tide-dependent: occasionally we had to wait to cross estuaries safely, another reason to schedule conservatively.

Once we arrived at the campground – yes, beside the beach! – we explored the lagoon with its stunning Mount Bowen backdrop. Again, this estuarine lagoon is unsafe for swimming. However, it is a photographer's dream and I took a million shots to capture sunrise on the mountain.

We considered the unmarked route to the summit of Mount Bowen, but prior research suggested the terrain would be too demanding for two old farts unaccustomed to tropical heat. Due to numerous accidents, a Parks permit/induction is mandatory: secateurs are recommended!

Instead, we filled water bottles from the lagoon inlet and enjoyed wildlife in camp. Birds flit in treetops and a Spotted Tree Monitor glided between tents. The campsites are fantastic: flat, sheltered, and with "pack racks" to prevent hungry critters reaching our food.

We searched the headland for caves and watched fish in the lagoon. At night, we were lulled to sleep by hushing waves on the shore. It was surprisingly cool; we had our summerweight down quilt and needed it.



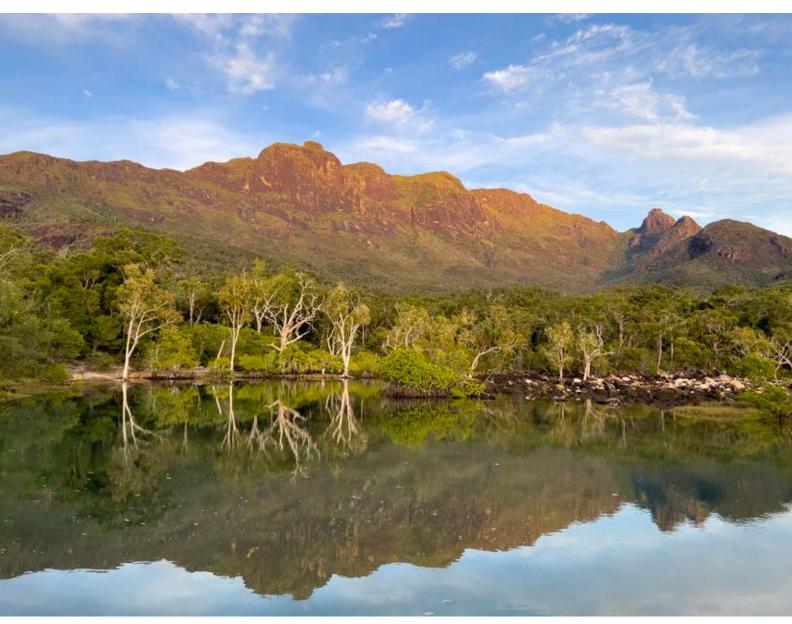
Little Ramsay campsite with pack rack



Collecting water from the lagoon inlet at Little Ramsay campground



Tree monitor at Little Ramsay campground



Mount Bowen early morning

## Day 3: Little Ramsay Bay to Zoe Bay, 10.5 km

A beach start today, detouring for a cooling dip in a tiny pool, followed by rocky headland scrambling, more lagoons, and beaches.

After a steep, exhausting climb, we diverted to Banksia Bay campground for a peek, then headed inland, crossing rocky streams that were easy now but treacherous after rain. The multi-textured emerald forest was marvellous, so different from South Australia's olive-green eucalypt. We swam at Blue Lagoon before continuing across soggy floodplain to reach Zoe Bay campground. The tent sites were shady and the beach sunset, complete with silhouettes of palm trees and mountains, was magnificent.



Hidden lagoons



A cooling dip in a rockpool



Scrambling over rocky headlands



Crossing a creek at low tide



Boulder Beach requires rock hopping



Steep climbs between Ramsay and Zoe



This would be demanding or impossible in the wet season



Swimming in the Blue Lagoon



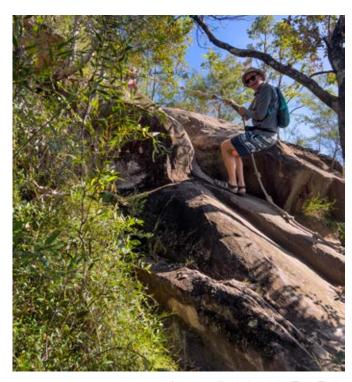
Zoe Bay campground



Zoe Bay sunset

#### Day 4: Indulgence Day at Zoe Falls

Most descriptions recommended two nights at Zoe Falls. It's a short hike to the falls from the campground and we swam in the rock pool at the base, then climbed the trail to the top to enjoy the famous infinity pool and views. We were on an (almost) deserted tropical island and we wanted to savour every wonderful moment.



A rope climb beside Zoe Falls



Zoe Falls

#### Day 5: Zoe Falls to Mulligan Falls, 6.7 km

Today's hike is relatively short but surprisingly tough with an elevation gain of 300 metres over short sections; the track stays inland. Because distances are modest, leisurely hikers like us have time for a final swim at Zoe Falls either in the pool or at the top. We then climbed to a saddle with expansive views, followed by a long descent along a spine, across the boulders in Diamantina Creek (yet another place to cool down) and through rainforest into Mulligan Falls campsite. The falls were unbelievably photogenic, the rock pool perfect for swimming. Electric blue Ulysses butterflies flitted overhead. It was insanely beautiful.



The track can be impassable in heavy rain



View from the saddle to Zoe Bay



Mulligan campground



Descending the long spine to Mulligan



Breakfast at Mulligan Falls

#### Day 6: Mulligans Falls to George Point, 6.3 km

This easy day provides a delightfully relaxing finish, primarily downhill through different rainforest, then along the beach. We had chosen to be collected late so we could enjoy another swim at Mulligan, but timing also depended on tides as there was another estuary to cross.

It was shallow when we arrived, but high tide would make it waist deep - we were glad we were not late.

It has been an extraordinary journey, one of the most unique, varied and spectacularly beautiful hikes we've done anywhere in the world: banner days to immerse yourself in, with memories to last a lifetime.



Last estuary crossing at low tide - high tide reaches the vegetation





Based in South Australia, Helen and Geoff play on the water in their kayak, in the air in their hang gliders and on the earth in their hiking boots. Neither are athletes but they enjoy numerous fantastic trails - including long distance ones - at their own pace, which is more relaxed and with shorter daily distances than usually promoted online. Their non-profit website Slowerhiking.com aims to inspire and empower other leisurely hikers with examples of relaxed multiday itineraries adapted from more traditional schedules. See their website for more Thorsborne Trail Planning and Tips plus maps, elevation graphs and other useful daily details.

# In the **News**

## New plant discovered in Northern Territory National Park

Peter Jobson, formerly the chief botanist of the Northern Territory, discovered a new plant in the Judbarra/Gregory National Park.

## Kenji Sabine travels to Tasmania's most remote locations for science

Trail cameras are being installed in remote parts of Tasmania to support scientific research and will be used by academics and PhD candidates at the University of Tasmania.

#### Blue Mountains key to koala survival?

Despite the devastating summer bushfires, the Blue Mountain area region is a climate refuge for the koalas.

## Wombats on brink of being critically endangered

Conservationists warn that wombats in areas affected by the New South Wales floods are at risk of becoming critically endangered as they struggle against habitat loss, disease and pneumonia.

# Bogong moth believed to be making comeback five years after nearing extinction

The Australian Conservation Foundation's 2022 Bogong moth migration snapshot found population numbers seemed to have increased, but are still a long way from the billions of moths seen before they were declared an endangered species.

#### The battle for the Otway Ranges

Twenty years ago, a long and bitter campaign to end native-forest logging came to an end in Victoria's west. Against all odds, a motley group of conservationists took on power and industry and won.

#### 2023 for Coastrek Twilight 20 kilometres

Coastrek just got wilder. Join an epic adventure of fun, fitness, friends and fundraising on 24 March 2023. Fall in love with fitness and enjoy a wild girls' night out – minus the hangover!



# A Peek at Lendenfeld

Text and photos Sonya Muhslimmer

I was recently reminiscing with some friends about mountain climbing trips in New Zealand I did around 10 years ago. As you do, we talked about the times when we were a lot fitter. stronger and younger and you wonder where all those years went. I really wanted to go back and try it out again as I really enjoyed the climbs I did many years ago. Oh, and the mountains in New Zealand are something else. Well anyway, my friend Julie still keeps in touch with her old mountain guide, so we ended up getting in contact with each other. The guide called me up and offered some dates.



Ledenfeld Peak. Look closely and you can see the other party reaching the false summit



The Wanaka Tree

hose dates were pretty soon coming up so it would not leave me with much prep time. Considering it has been a long time since I had done some serious stuff like climb a mountain. Even during the last few years I have slowed down a bit on weekends (due to fires, flood and COVID) so I was not really physically prepared to do some major mountain climbs. However, after a few conversations with the guide and FOMO, the fear of missing out got the better of me and I started prepping. I live in the Blue Mountains so I have a good training ground. I filled up my pack with bricks and walked up and down the hills most nights for preparation.

I had figured just to go with what I could manage and even just to be in the mountains again would be enough. Oh and to have a week off work, for me it was a win-win situation, and if I could get up a mountain or two, that would be worth it. So off I went.

I arrived in New Zealand on Saturday night in late November 2022 and stayed in Queenstown. The next day I had time to

wander through the botanical gardens and the lake foreshore, do a little bit of shopping for my nieces and nephews and then catch the shuttle bus to Wanaka. After I arrived at my



accommodation, I took a stroll to that famous Wanaka Tree, and up along the lake to see some beautiful views. The Wanaka Tree is a willow tree and it sits alone in the water. Somehow it has become one of those famous Instagram destination, it is one of the most photographed and famous trees in New Zealand. The next day is where it all begins.

#### Day 1: Wanaka to Fox

I was picked up from my accommodation by my guide Gavin Lang and we went back to his house to organise gear (transceivers, ice axes, crampons, snow shoes, ice screws, ropes etc). It was a beautiful day in Wanaka, the sun was out and hopes were high. The weather forecast was checked and there was a window of opportunity to get up the mountain that afternoon. And after this there were a few days of bad weather. We were soon on the way to the Fox Glacier. As we got to Fox Village the bad weather became more obvious. Well, we missed out on flying up in the helicopter by about 20 minutes, they had closed for the day due to bad weather. Bugger.



... we missed out on flying up in the helicopter by about 20 minutes ...

There is a small base camp hut right near the helipad that climbers can stay in just in case this situation occurs, so back to the hut we go. After a bit of a break and waiting to see what the weather did we went on the Moraine walk to the Fox Glacier, for something to do before hut fever kicks in. Prior to 2019 you could drive up fairly close to the glacier. however a major landslide destroyed the only road access to the glacier, so now it is walking only. This road was only repaired from a landslide just two months prior to it being wiped out again. Over 300 metres of the road was either completely washed away or significantly damaged. After already spending nearly \$430,000 fixing up the first lot of damage, I can understand why the councils have not bothered to fix it up again. It was pretty impressive to see that's for sure.

#### Day 2: Stuck at Fox

The weather was bad, the mountains were so far away, I have spent a lot of money to get there and I am stuck at base camp. I was not happy. I know you can't do anything about the weather so I just have to stick it out. It was a very long day today, we did a bit of Prussiking and rope practice, another walk to town. I went to watch a bunch of people talk about helicopters in a hangar. Gavin was preparing to change the poo drum at the mountain hut so he had to learn how to manoeuvre around it and an active helicopter, so at least there was some activity for the day.

#### Day 3: Still at Fox

Well, today was another very long day indeed. Again more rope practice with the z-haul pulley this time. The z-haul is an effective method of pulling someone out of a crevasse, and is a good one to know. In my canyoning training days we learnt this and it is something not used much, but again it's a really good thing to know, as you never know when you may just need to use it. After what felt like an eternity, in the afternoon we took a walk to the south side of the Fox Glacier, along the track known as the River Walk, through some beautiful and ancient podocarp rainforest with a glacier viewpoint along the way. Once you reach the end of the track, well it is an extreme flood hazard after that. Walk at your own risk. The weather cleared up today and on the way back to base camp we stopped in at the local pub for some hot chips.



The z-haul is an effective method of pulling someone out of a crevasse ...

#### Day 4: Fox to Pioneer Hut

I was under the impression we were going to be one of the first to fly, so I was a bit surprised when we got to the helipad that there were already tour groups going up and another group waiting. We got the gear out of the car, placed it behind the fence ready for the helicopter to come back, in the same time the clouds started rolling in, the organiser comes down to the helipad and says no more

flights due to bad weather. I was gutted. The tour group left and we were talking to the pilots for a while, then we left. There is a vantage point to see up the valley so we drove there to check it out, there was no visibility so back to base camp we go. After a bit of moping about, we contacted the organiser and made our way down to the helipad to see what was going on.

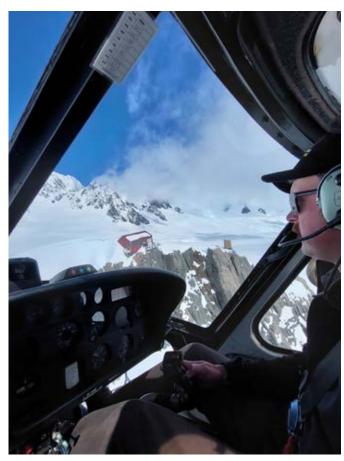
There was a small window of opportunity that opened up, and just like that within five minutes we were in the helicopter. It seems so strange it was such a long wait then all of a sudden within minutes it was on. Pioneer Hut sits at 2288 metres high on Pioneer Ridge, on a side of a rocky cliff above the Fox Glacier neve. This is one of the busiest alpine huts in New Zealand, and sleeps up to 16. The pit toilet, well, I must say has the best views in the world. It was another world up there, the skies were clear, it was perfect. We got out of the helicopter, got the gear into the hut and organised ourselves and our gear, roped up and went exploring, for about 500 metres. Then the weather came in and visibility was

quite bad, so we went back to the hut to practice self-rescue with an ice axe in a safe place, where there was no risk of falling into a crevasse. The weather cleared up for the late afternoon so I enjoyed the immense view. There is something so humbling being up here, another world away. I must admit I was blown away and I did feel a little overwhelmed by it all.

There were five other people in the hut, who had just finished their studies at Uni and were up there for three weeks; gee they had a lot of gear. It was good to have other people to talk to and share experiences with. After dinner it was off to bed as we have an early start in the morning. The group were also gearing up to leave the hut around 1.30 am to do the same peak as us; we were planning to leave at 6 am.



The pit toilet, well, I must say has the best views in the world.



The first sight of Pioneer Hut

#### Day 5: Lendenfeld

Today was the day we get to do some mountain climbing, finally. The alarm was set for 5 am and after breakfast, we were off. The destination was Lendenfeld Peak at 3194 metres, 900 metres above the hut, just 500 metres lower than Mount Cook and it is the eighth tallest mountain in New Zealand. The climb was an 8.2 kilometre round trip and we completed it in just under nine hours. It was a stunning day, with the snow crisp and solid underfoot.

Just as we were starting to climb the near-vertical part, the party of five that left at 1.30 am had just reached the summit. I must say we either did really well in catching up to them, or they were going at a slower pace. I guess my advantage was that I had an experienced guide who was familiar with this terrain and they did not, so I was assuming they were taking their time crossing avalanche-prone sections



The summit view from Lendenfeld Peak looking north



You really have to concentrate on everything constantly as one wrong step can land you into trouble.

and walking very precariously, dodging crevasses along the way. As we made the summit, the clouds started coming back in and disturbing the view, and my what an amazing view it was, looking over to Mount Cook and Mount Tasman. Once you stopped moving you started getting cold, so there was not much time on the summit so back to the hut we go. There was a section I was down climbing and I stepped over a crevasse, and just kept looking down into the hole with that awe of how far does that go down. Wow it was daunting. You really have to concentrate on everything constantly as one wrong step can land you into trouble. Also, when you are

crossing sections of avalanche territory, and little bits of snow are rolling down a steep gully you are standing in, it makes you move a bit quicker, however you want to make it as fast, and safe as possible. It was good to be back at the hut with a hot cup of tea in hand.

#### **Day 6: Pioneer Hut**

Today we were attempting Glacier Peak which sits at 3002 metres high, again leaving at 6 am after breakfast. After walking about two kilometres, and just about to get onto the steep, near vertical climb, well maybe not vertical but very steep part at least. I had decided I could not continue. I was feeling gueasy, out of breath, complete lack of energy and my hip was starting to feel sore. I have suffered from bursitis previously and seems it was resurfacing, and we were planning to walk down to Chancellor Hut in the afternoon. This walk out was another eight kilometres, crossing over a few glaciers with a crevasse risk and I don't think I could have managed. Was it altitude sickness or just pure exhaustion? I didn't think the climb yesterday

was that bad. I was tired coming back to the hut but physically I felt ok. It was bittersweet turning back as the weather was perfect and I was here to climb a mountain, I just felt that I could not do it. We went back to the hut to rest. I really wish we could have got up here earlier as we literally wasted three days at base camp due to bad weather, a lot of time lost there.

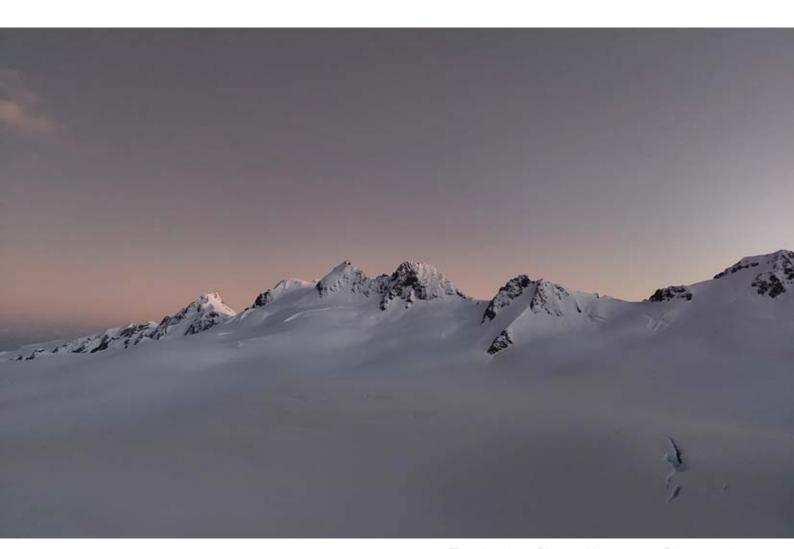
In the afternoon we started walking out. After about two kilometres, I was really struggling to walk. A few steps and I was out of breath, feeling like I was going to be sick and my hip was really sore. So we decided to go back to the hut and call a helicopter for the next day. I didn't really want to cop a huge bill for the flights, but I don't think I had much choice. We could have attempted to walk out the next day but the weather forecast was not looking great and I had to be on a flight back to Sydney in two days so I doubt we could have made it in time anyway.

#### **Day 7: Pioneer to Wanaka**

This morning was just waiting for the helicopter. It was coming at any time there was a gap in the clouds that the pilot could fly through. We had to be ready as they could have come any minute, and from the helipad at the road the flight only takes around 10 minutes. So while we were waiting, Gavin made a few markings in the snow for the helicopter to land safely, then we waited a bit more. It was interesting looking down in the valley as the clouds were quite thick below us, but it was a perfect day up here. We were on the radio a few times checking in to see



It was coming at any time there was a gap in the clouds that the pilot could fly through.



The view from Pioneer Hut at 5 am. Picture perfect

how the weather was on the ground. I was a bit concerned that the clouds were rolling in and they were going to cancel flights again. Eventually we got the call that they were on their way. It was quick grabbing the gear and getting to the landing pad. As soon as the helicopter landed, I hopped into the front seat, buckled up and Gavin loaded the helicopter and before you know it we were on our way.



I must say it was a bit of a thrill, and I have a lot of respect for those helicopter pilots.

The flight down was pretty interesting as it was a scramble to find a suitable spot to get through the clouds. The pilot asked me to put my camera away as it was a bit tense there for a minute, however he managed to get through with a few interesting manoeuvres, and I held on tight. I must say it was a bit of a thrill, and I have a lot of respect for those helicopter pilots. Once we were back on solid ground it was back to Wanaka.

#### Day 8: Wanaka to home

Today was just a travel day. I was picked up by a cab at 7.15 am from my accommodation, got the shuttle bus back to Queenstown, then waited at the airport for a few hours for my flight. I managed to get a few last souvenirs for my nieces and nephews at the airport, then I arrived in Sydney in the afternoon. I caught a train back to the Blue Mountains, which takes about two hours and arrived home about 8.30 pm, 10.30 pm, NZ time. It was a long day.

I have a bittersweet feeling about this trip. I got stuck in a hut down in the Fox Village for three days, which felt like an eternity. It would have been so much better to be on the mountain, but I know you can't do anything about the weather. It just felt like an absolute waste of time, and a lot of money



I have a bittersweet feeling about this trip.

wasted. I feel also if we did get up there earlier I could have done a lot more climbing, so I missed out on a lot. On the flip side, I had my first ever helicopter ride, I learnt and had a refresher training on rope skills and self-rescue with an ice axe. I climbed a mountain and I got to hang out for a few days in absolute stunning mountain terrain. It really was another world up there so I can't complain about that.

Lastly, I will tell you a little bit about my guide, Gavin Lang. He has been guiding since 2004 and has climbed all 24 of New Zealand's highest mountains. Being a mountain guide, a photographer and an author are some of his many talents. I was in good hands. You can check out his work at Seeking the Light - Potton & Burton and also at First Light Guiding.



Just before the summit of Lendenfeld Peak Gavin Lang

# **Videos**





## Seven ways to Leave no trace with minimal impact bushwalking and hiking

I run through not just the physical tips of what to do but also think about some of the other ways we can minimise our impact both socially, culturally and continue to love these wild places for a very long time to come.

#### Arc'teryx presents: Shaped by Wild

Spanning a distance of over 1200 kilometres, the diversity of landscape and culture distinguish British Columbia's Coast Mountain Range from anywhere else on earth. Through the eyes of individuals who have chosen to forge a life amongst mountains, forests, and the ocean, the depth of the range is discovered.





## Hiking the Stirling Ridge, WA's most epic trail

What an adventure! The Stirling Ridge Walk is the hike I have been looking forward to the most, and it definitely lived up to expectations.

#### **The Western Arthurs Traverse**

This 80 kilometre trek across the Western Arthurs Range will have you slogging through knee-deep mud and scrambling up and down exposed rock walls.

# High Times in the **High Country**

**Text Damian McDermott** 

**Photos** 

**Damian McDermott and Chris Byrne** 

"Will there be snow?" My ten-year-old daughter Mary excitedly asked as we look up a picture of Pryors Hut, a rustic timber mountain hut surrounded by gum trees and a blanket of white snow. I tell Mary it's possible, without trying to get her hopes up. But I can tell she has interpreted it as "there will definitely be snow". Pryors Hut is situated high up in the Brindabella Ranges at an elevation of 1650 metres and is no stranger to snow, but it's also late September and this week's forecast is looking more wet than snowy, with up to 20 mm of rain expected, so we will be lucky to see snow.





The Crazy Danger Crew: Chris, Ava, Rory, Mary, Damian and Daisy

ur group includes myself, my two kids Mary (10) and Daisy (13), our friend Crazy Chris and his kids Rory (12) and Ava (15). We've been bushwalking together for years as the "Crazy Danger Crew" and the kids are primed for a real mountain adventure. It's the spring school holidays and our plan is to spend three days in the "Brindies". Walking up the notoriously steep Stockyard Spur to camp at Pryors Hut. We'll then take a day trip up Mount Gingera (1865 metres) and walk back down Stockyard Spur on day three.

Day 1: Stockyard Spur To Pryors Hut, 9 km

The trackhead for Stockyard Spur begins at Corin Dam (elevation 950 metres). It's a 45 minute scenic drive from our accommodation at "Danger Nanna's" house in Kambah. We drive all the way to the end of Corin Road which crosses over the spillway/dam wall. There's a small car park and a pit toilet, there are also beautiful views south towards the mountains and north to the Cotter River below.

We're packed and walking by 11 am and the track is easy to find. From the end of the car park we pass the decommissioned amenities block and Namadgi signage and follow the track towards Stockyard Spur. The ascent is steep, gaining over 500 metres in the first 2.5 kilometres. But we aren't in a hurry and we have sweets and treats ready for emergency



Helipad

deployment. The track is well built with stairs and switchbacks and we stop multiple times for breaks. There are no tears or meltdowns like our climb up Ironmonger Hill last spring. The kids are all a year older which helps and they carry their own packs the whole way up. After nearly two and a half hours we hit the "helipad" (elevation 1550 metres) a flat clearing that marks the end of the climb and the beginning of the high country.

We still have about a five kilometre walk to Pryors Hut, but after the helipad the walk becomes a gentle stroll to the highest point at about 1650 metres. The scenery is beautiful with eucalypt forests, alpine grasses, granite tors and views towards the mountains. We haven't seen any snow, but the kids don't seem to mind. Eventually we intersect with Mount Franklin Road and follow it south-west for about a kilometre towards Pryors Hut.

The hut appears in a clearing just off the road, a welcome sight after almost five hours of walking. We set up our tents, collect water, gather firewood and prepare for a relaxing evening by the fire.

#### **Pryors Hut**

Pryor's hut was built in the early 1950s as temporary accommodation for the workers at the alpine botanic garden. The garden was commissioned by Lindsay Pryor - the ACT's



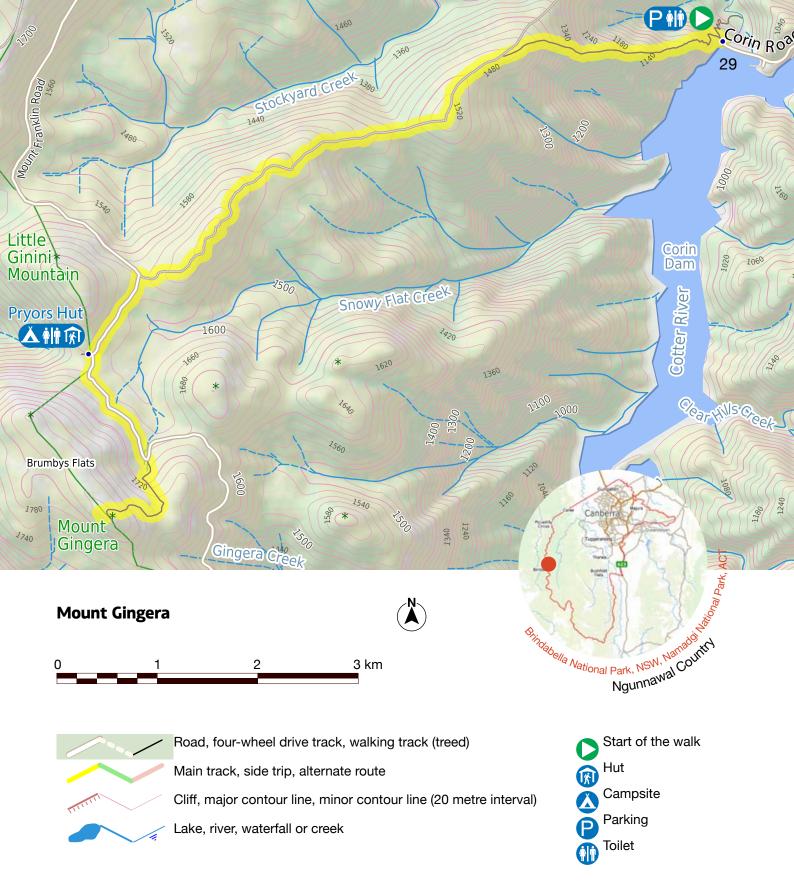
Stockyard Spur



Mount Franklin Road



Afternoon highest point 1650 metres



Superintendant of Parks and Gardens at the time. Pryor's dream never saw completion but his legacy lives on in the remnant exotic pine grove beside the hut, a stunning site now after seventy years of growth. Pryors Hut consists of two large rooms and a smaller entry room. There is one door, a large open fireplace and a handy kitchen bench, lit by south-facing windows. There are very few amenities with no chairs, pots or billies and the walls and floors have become a rodent metropolis. It would take a serious emergency to want to sleep here, but it is a comfortable haven for our group of six to prepare meals and enjoy a candle-lit evening by the open fire. After fresh pasta, marshmallows, hot chocolates for the kids and a few wee drams for Chris and me. we hit the tents around 8.30 pm.

#### Day 2: Mount Gingera, 5 km

We slept to the gentle patter of rain on the tents and woke to a wet and misty morning. It was cool but not cold enough for snow and the rain continued as we sheltered in the hut by the fire. Not wanting to be cooped in, the kids took my phone and filmed a short horror movie around the hut and pine forest. The film was about a colonial ghost boy terrorising three YouTube girls. It's like a cross between the Blair Witch Project and Wolf Creek with some modern "influencers" thrown in. Chris and I tidied up breakfast, trying not to disturb the creative magic and prepared for our walk up Mount Gingera.

At an elevation of 1859 metres, Mount Gingera is the second highest mountain in the ACT. The walk from Pryors Hut to the summit



Day 2 - Starting out for Gingera



The start of the Gingera climb

is a five kilometre return trip with an elevation gain of about 200 metres, so we can take it slow and easy. We all put on our rain jackets and Chris and I are carrying a backpack each containing lunch and warm clothes. At 10.30 we begin the walk in the drizzle along Mount Franklin Road towards the summit track. On the way we startle a Boobook Owl resting in the snow gums and observe it for a while with binoculars.



View from Mount Gingera

About a kilometre from the hut we reach the summit track, it's a steep single track with water streaming down the track from the rain. The views are meant to be amazing but the air is misty and the mountain is obscured by cloud, so it feels like a real highland adventure. On the way up we see Flame Robins and White Winged Choughs flying among the wind-swept snow gums, but no views and no snow.

At the summit are a series of impressive granite boulders, with footpads leading in all directions. The kids immediately rush off to explore as Chris and I take in the atmosphere at a slower pace. From the other side of the summit we hear the excited cries of "Snow! Snow!" The kids have discovered deep snow drifts between the boulders on the southern face of the mountain and immediately start playing in it, throwing snow balls and trying to slide on their jackets. We remove the hard plastic frame from a daypack and punch a pair of holes at one end with my Swiss Army Knife. Then we thread a piece of cord through the holes to make a steering rope - in three minutes we have a little DIY toboggan. The kids spend the next hour sliding down a large snow drift, continually improving it until it resembles a section of luge track.

As we eat a picnic and share a flask of hot tea, the cloud over Mount Gingera lifts and an amazing view to the south appears. The kids are all soaked from their snow play and the sun helps to warm us up. We dismantle the "toboggan" and cross the summit where we take in the sweeping 360 degree views. It feels like we're on a different mountain to the one we climbed up in the morning. The kids rush off ahead in the direction of the hut and Chris and I take it slow, being careful not to fall on the slippery slope.

We return to camp, gather wood and light the fire for our second lunch. Chris asks for my knife to open a can and after checking my pockets I discover I've left it on the mountain. It's not quite three o'clock and it's less than five kilometres return so I decide to run back to Mount Gingera and climb up to look for it. None of the kids are keen for another climb so I pack a jacket, water and walking pole and

go solo. There's some heavy weather closing in from the west and the breeze is picking up, but I make good time and find the knife lying in the snow at the edge of our luge track. I'm the only person on the mountain and before I descend I take a moment to breathe in the air and bask in the view. I feel a sense of overwhelming gratitude to be immersed in the elements and the grandness of my surroundings.



Gingera toboggan



Day 2 - Drying out

Approaching camp I get a phone call - it's Andrew Pearce from Canberra who was thinking of joining us today with his two young kids but decided against it because of the weather forecast. Perplexed, I check the BOM app on my phone. There's a minimum temperature of one degree and 20 mm of rain expected overnight, with storms rolling in from the west - I rush back to the hut to share my screen shots of the forecast. We bolster our wood supplies, fortify ourselves with a hearty pasta dinner and watch the world premiere of the latest Brindabella Mountains horror movie (on the small screen). By the time we hit the tents, it's cold outside and the sky is full of stars ... Maybe the rain has passed us by?

#### **Day 3: Pryors Hut To Corin Dam**

It's not yet midnight when the rain hits us. It's heavy and constant and sounds like someone is blasting the tent with a fire hose. It's also very cold. I always apply a "three bears" principal to our sleeping bag usage: Mary is the youngest, so she gets the warmest - an 18 °C snow camping bag. Daisy has the next

warmest goose down bag with a thermal liner. And I lie in the middle with our lightest bag, listening to the deluge waiting for the inevitable flood. But it doesn't happen - the three of us are completely dry and once again I'm appreciating the qualities of our Mont Moondance tent, possibly the best investment I've ever made. The rain continues throughout the night and into the morning, but amazingly we have a good sleep and wake up around 6.30 am feeling fresh and ready for the new day. Chris, Ava and Rory also survived the night, thanks to their bombproof Vango Cairngorm tent. We all use the hut to dry off by the fire and pack everything ready for our departure. Today we will descend down Stockyard Spur to Corin Dam and emerge back into the world of cars and roads and noise.

We're halfway through packing in the warmth of the hut when the rain changes. At first it becomes a kind of hail, then tiny beads of sago snow begin to fall among the raindrops. The little white beads become lighter and



Pryors Hut

fluffier and before long, big soft flakes of snow float down, covering everything in white. Ten-year-old Mary is beside herself with excitement. "I've never seen snow falling before!" By the time we are packed and ready to go the hut is blanketed by snow and looks just like the picture that excited Mary so much before the trip.



Daisy, Damian and Mary in front of Pryors Hut



Mary enjoying the snow

#### **Descending the Spur**

We take off at 10.45, following Mount Franklin Road to the turn off to Stockyard Spur and continue back the way we arrived. At the 1680 metre high point we look back towards Mount Gingera - the mountains are now covered in snow and the kids improvise "snow cones" by adding cordial onto snowballs.

Daisy's hiking boots have a big hole in the sole after being cooked by the fire last night, so we put her foot in a plastic bag to help keep the slush out - but she barely notices. We pick up a good pace and are at the "helipad" by 12.45 pm. The climb down the spur is just as steep, but this time Chris and I are the slow ones with our middle-aged knee joints. The kids seem to have no problem and the section of walk that took us 2.5 hours to climb up ends up taking less than one hour to climb down. By 1.45 pm we are at the carpark, in dry clothes celebrating with cool cans of Guinness and soft drink for the kids.

#### The wrap up

We were looking for an authentic high country experience - complete with snow - a stone's throw away from Canberra and we got more than we could have dreamed of. Despite the adverse weather we were comfortable by the fire inside the hut and the surrounding area was perfect for a couple of tents. The kids and adults all had a wonderful time and the trip has quickly become a highlight in our growing list of adventures. Stockyard Spur is not for the faint-hearted or for people who don't like climbs. It is an unrelenting thighbusting slog and if our kids were smaller or less experienced we probably wouldn't have attempted it. If you want to access Pryors Hut and Mount Gingera but don't want to smash yourself on the spur, you can reach another trackhead via Brindabella Road, Piccadilly Circus and Mount Franklin Road. This is a much longer drive and the steep unsealed mountain roads are sometimes closed to the public during high bushfire danger or in wet, snowy conditions. To access this route drive until the locked gate on Mount Franklin road and continue on foot for about 5 kilometres. The walk in is much easier and shorter than Stockyard Spur and a lot friendlier for

kiddies. This route is also open to cycling and would make a great bike-packing trip. We considered taking the Mount Franklin approach but decided on Stockyard Spur for the challenge. It's also a much easier drive, the entire road is sealed and is only 45 minutes away from my mum's house in Kambah.

#### **Useful info**

There is a decent pit toilet near Pryors Hut, but no water tank. Fresh water is accessible about 100 metres from the hut, on the road to Mount Gingera where a stream runs from the mountain through a culvert towards the low swamps. There is another clean spring flowing from the mountain about half way to the Mount Gingera trackhead. The weather was very wet while we were there so water



Day 3 - Finish

was abundant, I'm not sure how reliable the water supply will be in summer or during drought periods. The alpine environment can be unpredictable with extreme weather, high winds and snow possible any time of year, so make sure you are always prepared with adequate warm weather gear including sleeping bags rated to zero degrees or below. There is mobile reception on Mount Gingera but don't rely on it. Always let someone know your trip intentions and carry a PLB if possible. It's also a good idea to contact the Namadgi Visitors Centre while you're planning your trip.

Mountain huts are maintained by volunteers and parks staff, so be sure you keep them clean, take all rubbish away with you and replace any firewood you use. The huts are only meant for sleeping in an emergency so always bring a shelter and set up your tent a good distance away from the hut to allow other hut users access.

For more info about Pryors Hut check out the KHA Website.

Find out more about Ngunnawal culture and heritage on the Tidbinbilla Website.

For info on the shorter route to Pryors Hut check out Australian Hiker.





Damian is a Canberra-born bushwalking and mountain sports enthusiast who lives in Sydney. Since 2017 he's been taking his two young daughters out every season on a multi-day adventure and has (so far) managed to nurture their love of the outdoors without crushing their spirits. He writes about the adventures on his blog at randomfootprints.com with the hope of helping other parents find overnight adventures for kids.

The Author wishes to acknowledge the Ngunnawal people who are the traditional custodians of the land featured in this article.

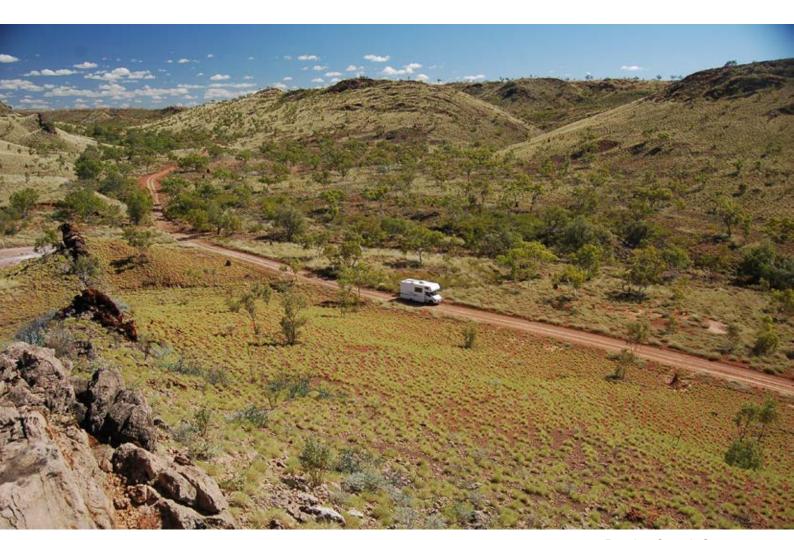


Day 3 - On the way home

# The Other Side of **Halls Creek**

Text and photos Ian Smith

Halls Creek wasn't on my list of stops. In fact, I even delayed getting there due to the chronic diesel situation that had eventuated.





China Wall

alls Creek wasn't on my list of stops. In fact, I even delayed getting there due to the chronic diesel situation that had eventuated.

The Shell pumps had broken, the other independent servo had run out because of that, and the only fuel available was at the Toyota dealer who was restricting people to just 60 litres. Needless to say, there was an endless queue of people awaiting their supply when I arrived. I found it necessary to join them, not really having any urgent itinerary. Later, I went to the local tourist office seeking information about things further up the highway.

The efficient lady at the tourism office provided me with a map and a few local spots to go and see. From beneath the counter she produced two photos of Palm Springs and Sawtooth Gorge, which I'd never heard of. They were enough to send me packing.

On the way east on Duncan Road, there's another attraction called the China Wall. I'd heard of this and stopped to have a look as it's only a kilometre or so off the road.



It turns out it's part of an extraordinary geological feature whose length is not known ...

It turns out it's part of an extraordinary geological feature whose length is not known, but it is visible from the air at several locations on the route to the Bungle Bungle. Bob and I had seen a much smaller version on the way to Karijini, but this one is much more dramatic. It's a sub-vertical quartz vein that is more resistant than the rock on either side. So it appears as a ruin of some ancient civilisation (or aliens, depending on what you believe in).

At the right time of day, the white is dazzling under the sun's rays in comparison to the drab browns of the iron oxide and the dull green of the lawn of the Apocalypse (spinifex) beside it.



It's a very scenic place with chittering bird life around the water ...

It's surreal to consider even how it came to pass that such a narrow strip could inject itself into the ore all those millennia ago.

I moved on towards Sawpit Gorge and, about 10 kilometres further in saw more evidence of the quartz fault. Naturally enough, I stopped to take even more pictures. Sawpit is just past Palm Springs, but as night was nigh, I bypassed them, made for the gorge, spent the dark hours beside an eerie massive rock face, and listened to the gurgle of a nearby brook. The night hours were simply magic.

Dawn allowed me to take in the scene. A large, heavily tinted rock wall had been cut neatly in two by the incessant water, and the placing of the carpark meant that your vehicle was in the shade most of the day.

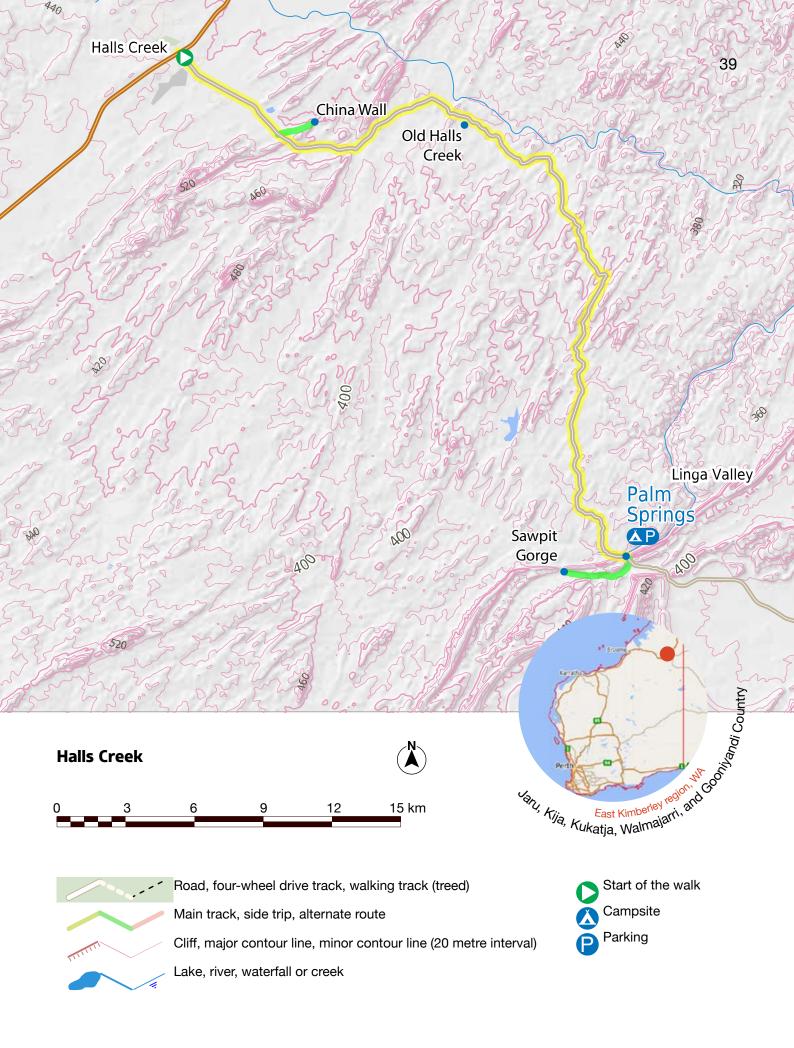
I walked for around two hours, through the stream, along the other side, then recrossed and followed the wall for a while. It's a very scenic place with chittering bird life around the water, flitting from tree to tree in their never-ending search for insects while the vibrant colours of the rock were showing up under the sun's rays.



Sawpit Gorge



Palm Springs



### 40 | Bushwalk February 2023

Chances are you'll have the place to yourself, as I did until the first visitors arrived around 10 am. And there were only two of them.

Satisfied I had seen what was to be seen, I ventured towards Palm Springs, stopping to scale a tall ridge beside the track to gain an overall view. I pondered as to just how many would have been up here.

Palm Springs is the scene of a failed attempt by settlers but still has the attraction of a first-class swimming hole about 40 metres long, fed by a permanent spring with palms scattered roundabout.

I waited for someone else to arrive, just in case I had an emergency. And so it was that I met Thornstein, my new German friend from

Essen who happened to be a lifeguard and who kindly took some pictures of me as he was a keen photographer as well. He was the only German in the world who (a) doesn't drink beer, and (b) doesn't follow football.

It was somewhat confronting to think that not far away was another spot with lots of freshwater crocodiles.

After the refreshing dip was over, we parted company, and I made for the historic Old Halls Creek. This had a sad set of ruins, historic plaques and a horde of motorised equipment in varying stages of decay set around some basic accommodation and a caravan park.

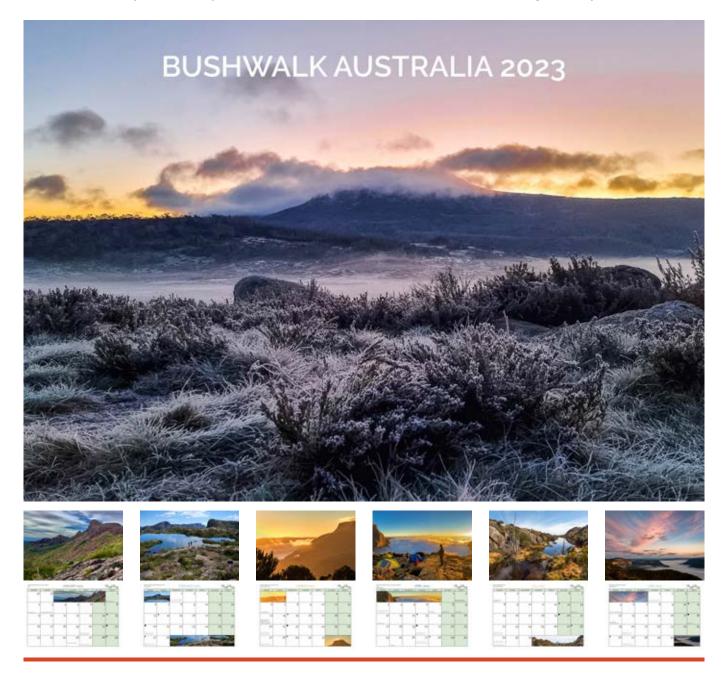
It had been more than I expected, but it was time to move on.



## 2023 Calendar

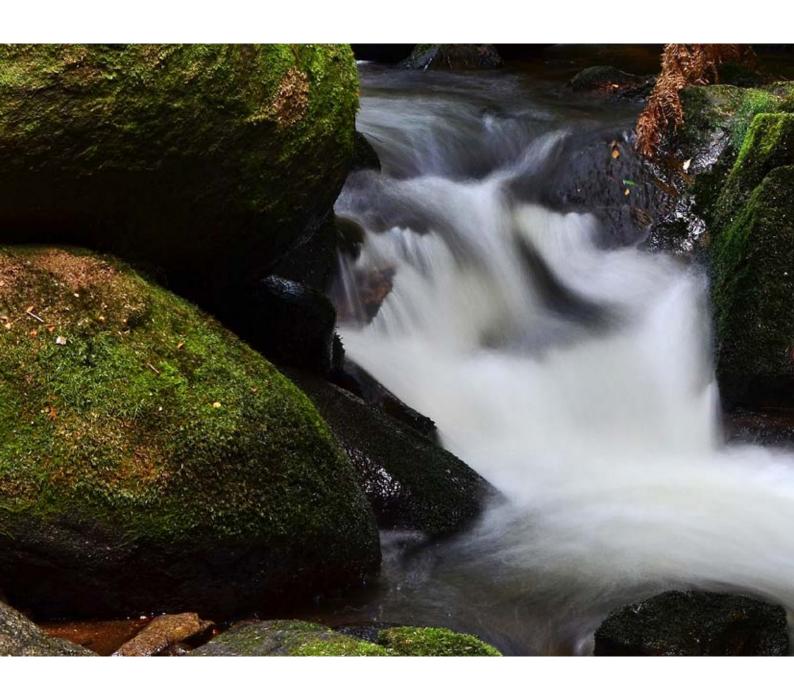
The 2023 calendar is a splendid collection of great pictures from the winners of the Bushwalk.com photo competitions. To en-

joy this amazing imagery, order your copy by emailing Eva at eva@wildwalks.com or click to **PayPal** order it straight away.

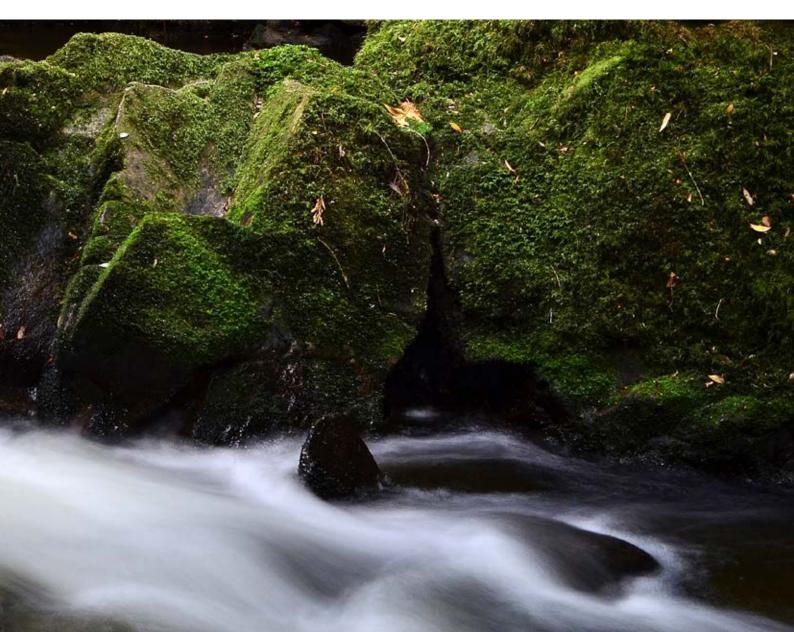


## Photo Gallery

**Photos Bushwalk.com photographers** 



Check this and other entries at Bushwalk.com Photo competitions



Halls Falls near Saint Columba Lorraine Parker

## Landscapes February 2022

Winner Rocking on North-north-west

The eastern side of the Denison Range was badly hit during the 2019 fires and recovery is very slow. But the rock formations haven't been affected and are still as awesome as ever.





Angophora Contata at Oakley Park Ian Smith



Golden glow **Tom Brennan** 



Locks Well Beach **Brian Eglinton** 

# Non-landscapes February 2022

Winner Eastern water dragon lan Smith

I discovered Oatley Park by chance when doing a house sit nearby - what a treasure in the middle of urban Sydney. Wonderful forest with beautiful angophoras, splendid views over the Georges River, a swimming area and historic areas ... oh, and the occasional Eastern Water Dragon.





Dew drops **Tom Brennan** 



Wind blown **Brian Eglinton** 

## **Tasmania** February 2022

Winner Near the Edge: Cathedral Plateau **Peter Grant** 

Tasmania's Cathedral Mountain is much more than one mountain. It's a high and extensive plateau: an amazingly diverse place well worth exploring for days. We took advantage of some fine summer weather to wander its high edge, looking out to dozens of Tasmania's highest peaks, discovering numerous "infinity" pools, even having a swim in one.





Light show **Tortoise** 



Stormclouds North-north-west



Early morning at Wylly Plateau Linda Fredheim

# Other States February 2022

Winner First light on the range **Tom Brennan** 

A 5 am start at Harrietville had us walking at 6:30 am on The Razorback in the Alpine National Park. Shortly after, the first rays of sunlight hit the range to the west, lighting it in pastel colours.





Coastal blues **Brian Eglinton** 



Storm clouds over Boggywell Creek (from Oatley Reserve) Ian Smith

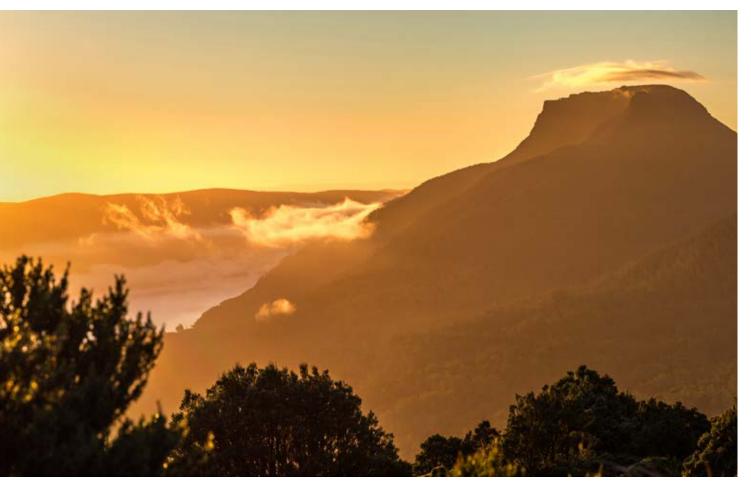


Balancing rocks at Tarana **Rafael Szumer** 

## Landscapes March 2022

Winner A fair enough start to the day North-north-west

Climate change isn't the only reason the scrub in Tassie is getting scrubbier and slower. Despite the extra effort, this sort of weather makes you welcome the chance for a bonus night out before returning to the track and "civilisation".





Clifftop ramble near cloudy corner Osik



A taste of Wollemi landsmith



Alpine garden **Crollsurf** 

## Non-landscapes March 2022

Winner
Paying attention
Brian Eglinton

Morialta Conservation Park near Adelaide is a real gem being quite rugged yet so close to the city. This is a choice park for observing koalas in the wild. But we also occasionally see these colourful Painted Dragons. This one obligingly propped in the middle of the path keeping a close eye on us.



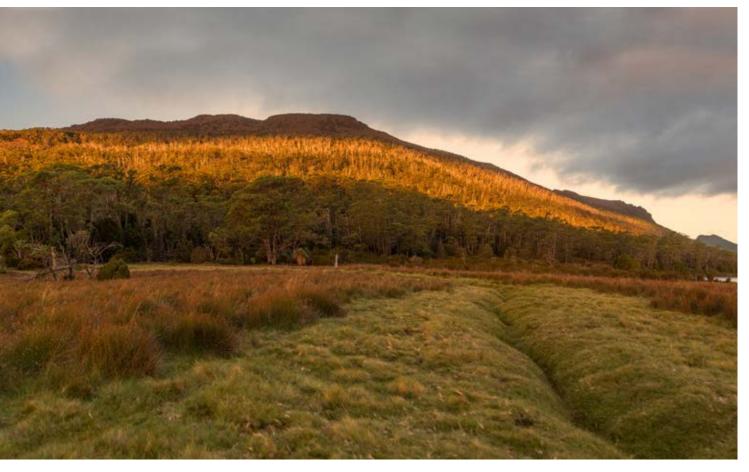


Christmas (or Jewel) spider landsmith

## **Tasmania** March 2022

Winner Olympian heights **North-north-west** 

Most visitors to Lake Petrarch camp at the southern end, but it was too early to stop so I pushed on to the grassy flats at the northern end. The sunset made the move particularly worthwhile.



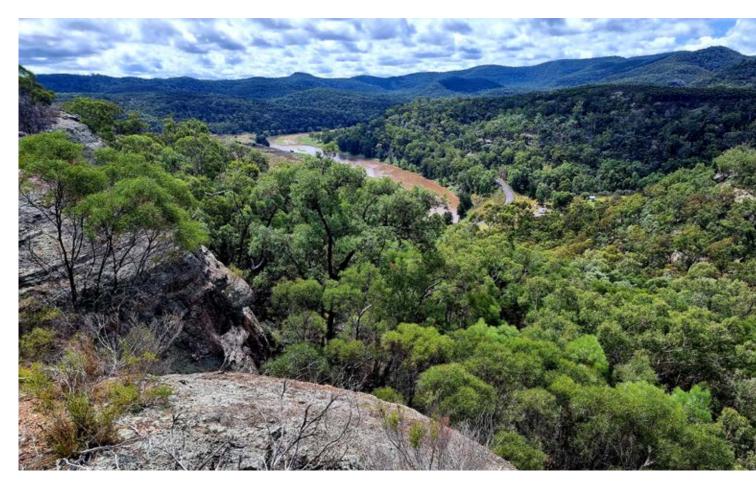


Rock hopping in the early morning light

## Other States March 2022

Winner
On high in Wollemi
lan Smith

I was headed out to Mudgee on the Bylong Valley Way and espied a distinct rocky outcrop so, naturally, I had to climb up and have a look, brushing aside 100 cobwebs en route to shoot the formation and the vistas over the Goulburn River.





Mount Townsend **Crollsurf** 

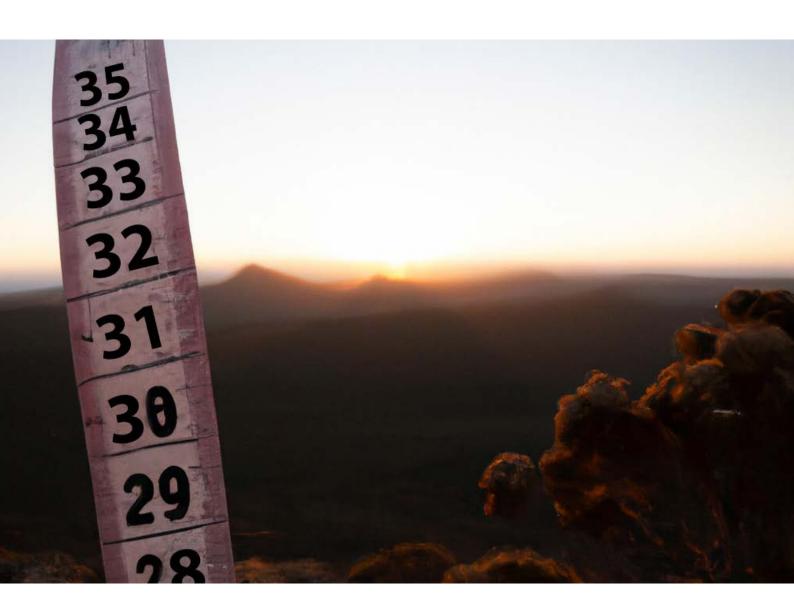


Gorge pools **Brian Eglinton** 

## **How far** is it?

**Text Matt McClelland** 

We have all been there. The sign, map and the website say it's a 10 kilometre walk, but your device at the end of the walk says it was 12.78 kilometres - what gives? It's not just about GPS accuracy. Surprisingly, it's impossible to give the definitive correct length of a walk.



t's obvious that the grades and the times for walks are at least partly subjective, but much more surprisingly it's not possible to give a perfectly accurate length for a walk. I know that seems ridiculous, but a good answer is possible. This article takes a stroll through some nerdy complexities of geographic concepts that highlight many of the reasons why the distances for walks vary between authors.

Now let me be upfront. These variations are minor and will not usually give lengths that vary widely; they will generally be in the ballpark. By the end of this article you will see why it's impossible to have the "correct" length. On the way you will also see why walks are also infinitely long, for the truly pedantic theoretical types. In the real world most authors cite distances well, but some are just plain wrong in my view, and sometimes it matters.

### **Resolution versus accuracy**

It's not unusual for me to get an email from a fellow bushwalker asking why my book says a walk is only 15.2 kilometres when it's "actually 20.12545 kilometres." Some devices give distance travelled to lots of decimal places, resolution of centimetres. Such a confident result makes many people assume it's very accurate, however a high-resolution answer is not necessarily an accurate one.

A big challenge when doing any measurement is knowing the accuracy of the system you are using. Ideally you would always use very high resolution with very high accuracy, but that would lead to challenges like cost, data collection limitations and data management issues.

### Small inaccuracies add up

And they add up very quickly. In good conditions your GPS might be accurate to about 5 metres, but the error is not consistent. So if you were to draw the GPS on map with the line you actually walked, you will see the GPS line zigzagging back and forth over your actual path. These little zigzags can add up to a lot. Just imagine how much further you would walk if you zigzagged all the way along the the track, let alone how drunk people will assume you are.



Small measurement errors can quickly increase the calculated length

It's common for a GPS to keeping adding distance walked as you sit over lunch. While sitting on a rock, the GPS is not moving but the imperfect readings make it look to the GPS as if it constantly moving a few metres around your actual rest spot, like a lost zombie. These small zombie movements add up over your rest break adding significant length to the recording. If your GPS is pointing away from the sky when you rest then these zombie movements will get even bigger. Some GPSs might use some other sensors to reduce this kind of error, but it will still happen.

Imagine your measuring device is a pedometer that just counts your steps. Even if it counts the number of steps exactly, every stride is a different length. Generally this might average out okay, but whatever we assume is the stride length will not be accurate. Your stride also varies with the terrain.



... the system just takes a good guess, usually reducing the error, but it's never going to be perfect.

### Big errors happen a lot

GPSs work best with a clear view of the sky, the clearer the better. The more the view gets blocked by trees, cliffs and thick clouds the more errors occur and the bigger they are. That zigzagging can get crazy, so crazy it will be obvious it's wrong as it might bounce around by hundreds of metres between each

measure. There are systems to clean this up, but the system just takes a good guess. usually reducing the error, but it's never going to be perfect.

Some tools like a GPS allow you to attach better antenna to reduce the errors, but all measuring tools will make errors. With care we can reduce these errors to a point where they will not be noticeable to walkers.

### **Resolution matters**

Resolution is not only the number of decimal places in the length but also refers to how often we collect data. With a GPS the more often you collect and store a location point increases the resolution. Most commercial GPSs can do this every second. Prosumer ones might do it 10 times a second. A bushwalker does not usually move terribly far in a second so we do not need extremely fast GPSs.



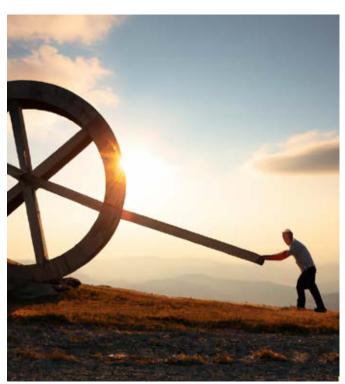
A GPS measurement (black line) at lower resolution misses important parts of the path (orange line)

Imagine walking a track with a lot of switchbacks. If the GPS does not capture a position at each bend, then the GPS line will look like you have cut the corners. In an extreme case it might even look as if you walked straight up the hill, measuring a much shorter travel distance. As you reduce the number of measurements you take, you will reduce the calculated length. After all, the shortest distance between the start and end is a straight line, just two points.

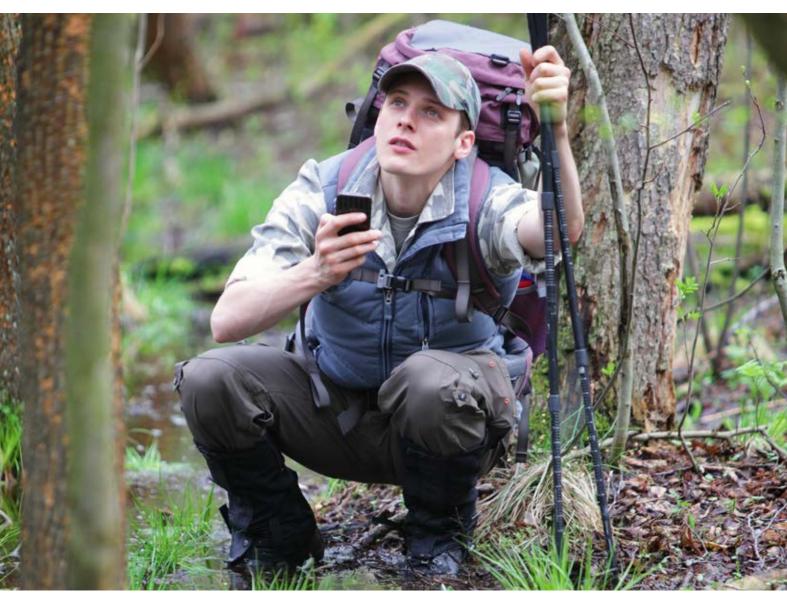
There is a paradox here. As you increase the number of GPS points (the resolution), then you increase the number of errors recorded adding to the calculated length. If you reduce the number of points, you do not measure all the bends in the track, leading to a shorter calculated length. There is no "correct" sample rate; just know that changing the resolution will impact the calculated length of the walk.

All measuring systems have inherent errors and as we take more measurements (increase the resolution) we include more errors. Imagine using a tape measure. The more often you measure the more errors are created, but the longer the tape is used the less detail of the bends in the track is captured.

A trundle wheel has a circumference of one metre that counts each rotation as you push it along with a handle - often considered the gold standard in measuring routes. You could see that a very small trundle wheel with a 10 centimetre circumference will capture a more detailed measure of the track, but each little slip error will adds up quicker. If you were really silly about it you might create a trundle wheel with a circumference of 100 metres: then you have a very low resolution measuring system - and some serious practical issues.



Impression of what an absurdly large trundle wheel and a brave bushwalker might look like



### Maths helps

Sometimes errors are fairly predictable, so there are tools you can user to help reduce the errors. GPSs can even calculate the margin of error for each point. There are many fancy algorithms that help smooth things out and improve accuracy. These are helpful, but since I am being pedantic here, all they really do is throw away data and smooth things to be more "normal". You can imagine how these could get carried away on switchbacks and smooth them out. In reality, if you are doing this kind of field data collection at scale you will use some tools to remove errors and then visually inspects the edited GPS line on a digital map with aerial and ground images for verification and small manual edits. Other tools can help improve GPS accuracy by correcting errors that occur due to changes in

the upper atmosphere. These errors pale into insignificance compared to walking near a cliff wall, cliffs and other large objects can really mess with GPS signals.

### What do we actually measure?

Even if we could measure perfectly then the next big issue is what do we measure. Well the track - isn't that obvious? There are different ways of measuring the same thing, all with different results, but all can be considered correct.

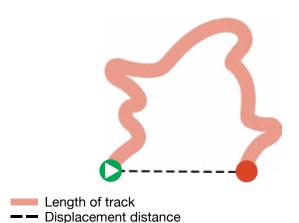
### Picking a line

Imagine you have a circular track. If one person measures the inside and another measured the outside then then outside will be longer. Neither is a wrong choice. The common standard is to measure the centre

line in this case. Even if everyone measures everything perfectly but use different approaches, then we get different results. The difference would be small and there is a common standard - so let's look at some other differences that will have a bigger impact.

### Length or displacement?

This one surprised me. Someone emailed me asking if the "distance" I provided was the length of the walk or the displacement, the straight line distance from the start to the end. I had never considered that some people might think that, but it's ambiguous and not stated. So even if the "correct" measurement is provided it's important to be sure that walkers know what it actually represents.



It's possible that an author could document walks using displacement. It would be weird that all circuit and return walks are zero kilometres, so I doubt they would see it as helpful for very long.

After getting this email I stopped using the term "distance" and started using "length". I also saw that the term "distance" could mean the how far it is from where you are to the start of the walk, especially if using a digital device. Standard language matters.

### Length of the walk or the track?

This decision can say that a track is 10 kilometres when the return walk is 20 kilometres. There are two main standards for track grading and communication in Australia (yeah, dumb I know). The Australian Standard 2156.1-2001 says in part it exists to "provide"

consistency of information to users of walking tracks". When talking about signs it says "Distance to a designated point.". This was understood by many to mean that a return walk to a lookout should have the distance to the lookout (not the length of the walk back to the start). The first few drafts of Australian Walking Track Grading System stuck with this idea, but later made it clear that you use the out and back (total walk) length. I am still surprised that people ask me if the length of the walk includes the return leg. This kind of ambiguity is what leads to some of the variability we see in walk lengths.

### What to include?

So if you are documenting a walk that has optional side trips that are very popular, should you include them in the total length of the walk? Some people do, some don't. Some say the walk is 10 kilometres (+200 metres), which is cool for power users but can create more confusion in others.



Personally I do not include the ride distance in the total length but some people do.

How about a harbour walk that includes a ferry trip or an alpine walk with a chairlift partway through a walk? You need to travel using them to complete the walk, but you are not actually walking. Personally I do not include the ride distance in the total length but some people do. For a walk with person powered boat trip or swim? Well, maybe I should include it because there is effort, but it's not walking - so I don't know. There are so many nuances. This is before we get to walks with alternative routes and other options along the way.

### Tracks change

Walking tracks change a surprising amount and these effect the length of the walk, usually a fairly small amount. Tracks get realigned often to avoid sensitive areas, reduce erosion, to improve safety or access to views. Sometimes these are planned and built by land managers; sometimes they just happen as people start walking a slightly different route. Then of course some walks are off track, so what is the exact length of that?

Remembering we are being pedantic here, so hear me out. Walks in snow or through sand dunes change in length over time if the up and down movement of the walker is carefully measured; the snow forces them to walk above the path and as the sand dune erodes it reduces the length. These might even change depending on how many people walk before you. Yes, most changes are tiny and will not matter practically, but I reckon it's an interesting issue when we live in a world where people expect accuracy, but do not have the time to dive into the complexities of what seems simple.

### Including the hills?

Some length measurements for walks include the hills and some assume it's flat. Let's simplify things for a moment and draw a hill as a simple triangle. We know that the base of a triangle is always shorter than the length of its two sides. In this simple example the height of the triangle is the hill, the base of the triangle is the horizontal distance travelled (the line on the map) and the side of the triangle will show the physical length of the actual track. The steeper the hill, the longer the sides get – this means the track we walk is longer than what is shown on the map.

Hill height

Length of the track on the ground

Length of the track on a map

So, should the length of the walk be the horizontal length shown on a map or how long a piece of string would be if placed along the path? I don't know. We could have very reasonable conversations that both options have their benefits and drawbacks.

Some publishers will include the vertical gain and loss along the walk in the walk statistics. If they were to include elevations changes in the length as well, then it might seem to exaggerate the difficulty of the walk. When including the vertical gain/loss statistic, some include it cumulative and some by the difference from the start and end. If doing it cumulative, then resolution matters a lot again.



There is also one very big hill that also has a tiny impact on the length of a walk - the curvature of the Earth.

There is also one very big hill that also has a tiny impact on the length of a walk - the curvature of the Earth. Take a pair of scissors and cut the edge of a circle and you can see the hill very clearly. Since the actual curvature varies across the earth and depends on the direction we are travelling in the maths can get complicated. The actual impact is tiny but it's still interesting to consider.

Hills are common and complicate the matter of measurement a lot.

### All walks are infinitely long

If you are a real maths nerd, you know where this is going (sorry to call you out). In the mapping world there is a cool mathematical problem called the Coastline paradox.

The Coastline paradox is a phenomenon impacting how you measure the length of a coastline. The more detailed the measurements taken the longer the coastline appears to be. This is because coastlines are not smooth, but jagged - full of small bays and inlets. So, the more detail you measure,

the more bays and inlets you will find, and the longer the coastline will appear to be. This is similar to the resolution issue we discussed earlier.

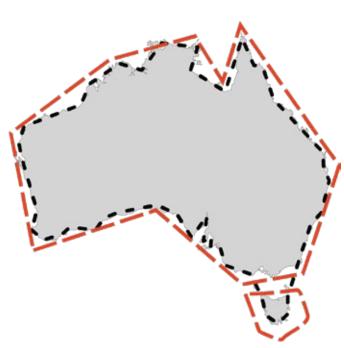
Now this is where things get a bit more theoretical, a conversation you would have with Sheldon Cooper perhaps. If you keep zooming in on a bay, you will see there are little bays within each bay. Zoom into a little bay - more little bays. Yep it keeps going forever, imagine all the little bays around each crystal within the rocks and grain of sand on the beach. Oh, and each of those crystals will have little bays in each atom (and it keeps going).

If you were to measure a coastline with infinite or near-infinite resolution, the length of the infinitely short kinks in the coastline add up to infinity. This is known as the divergence of the fractal curve.

### The walking track paradox

You could argue (with your very patient friends) that the Coastline paradox happens with many hiking tracks. Tracks do not appear fractal shaped like coastlines, so let's think another way. Turn the track on its side to look at its topographic profile – now that looks much more like a coastline.

As you walk up a set of stairs you walk in a straight line. Now think about a small lizard beside you. With shorter legs our little friend



Two Coast line measurements of Australia

— Lower resolution = shorter measurement

• Higher resolution = longer measurement



Creatures not to scale

needs to walk much further following each riser. The ant walking beside the lizard not only follows the risers but needs to go up and down over each stick and pebble. The flea does all that and over each grain of sand. A baby fairyfly needs to negotiate over the crystal edges of each grain of sand and the grain in the wood of the steps. The smaller you get, the further you need to travel, all the way to infinity.



The smaller you get, the further you need to travel, all the way to infinity.

I am not proposing that all walking tracks are listed as infinite kilometres. However, it's helpful to go through thought experiments like this to get a sense of how complex seemingly simple things can be. The more you understand a topic the more simply you can explain it, but is also true, that simplistic answers become more difficult to ignore.

If you create a standard measuring the length of a bushwalk, just agreeing on what resolution you choose to measure both vertical and horizontal changes in would not be obvious. No publisher is going to be stupid enough to measure walks at the atomic level, but if we want consistency in walk lengths then we need to agree and standardise what is actually measured.

I am not sure my kids will appreciate my response that it's infinite kilometres to the campsite. Meanwhile, we can just smile when we see a discrepancy, knowing in our hearts that we just completed a walk with a truly infinite length.

"For every problem there is a solution which is simple, clean and wrong." — Henry Louis Mencken.

### The Earth is not round

To the shock of many on the internet, the earth is not flat, nor is it a perfectly round ball. Moving from the atomically small, let's look now at the big-picture view.



The Earth is a chubby sphere (close to an ellipsoid), where everything bulges at the equator as the earth spins. In fact, the shape changes constantly, the oceans are not flat, but change daily with tides. The crust even moves a bit each day and even entire continents are moving around a tiny bit each day. Chuck in earthquakes and meteor strikes, and we can stop thinking of the earth as a perfectly smooth bowling ball.

The earth feels hilly to us, but shrunk to the size of a billiard ball, it would be smoother than your average billiard ball. Our brains struggle with the scale of things we do not interact with.

### One of the problems with maps

Most walks are measured with data collected in the field - with all the imperfections mentioned above. The walks are then laid over an imperfect map with an imperfect understanding of the shape of the earth.

To make a map, we take a three-dimensional earth and squish it on a two-dimensional map; parts of the map must be distorted to make everything line up. Imagine trying to peel an orange and lay it flat. When you go from a 3D ellipsoid to a flat map, you are going to either have to stretch/shrink areas, change the shape or direction of lines or leave gaps. It's never going to represent the earth perfectly. Because of this distortion, the more area a map shows (as we zoom out) then generally the less consistent the scale for distances are across the map.

We call these deliberate distortions map projections. A projection is created using a carefully defined series of points called the datum. A datum is really a mathematical model based on a specific ellipsoid (a defined shape of the earth). A datum defines the origin, orientation, and scale of a coordinate system. There are many different datums in use around the world, each with its own set of parameters and characteristics.

We are not getting into the details of map projections, data and ellipsoids; just remember they all have a slightly different view of the exact shape and size of the earth. This means they will give different results as they measure distances between two points or the length of a path. In the Geographic Information System (GIS) world each system has known strengths, weaknesses and best use cases.

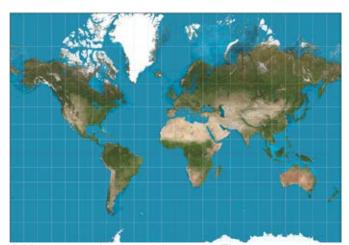
For bushwalkers, it gets extra confusing because we use different systems. We often use the Mercator projection for online and app-based mapping systems, a different one for topo maps, another for managing GPS data and another for measuring stuff.

### Map projections

Some smart people created the idea of map projections, a way of representing the threedimensional surface of the earth on a twodimensional map. We now know that it's not possible to create a map that is completely free of distortion, but projections give us a way to understand the distortion. There are lots of these projections, let us just look at a couple.

### **Mercator projection**

The Mercator projection is most commonly used for world maps and nautical charts. It distorts the size of land masses near the poles, making them appear much larger than they are. This projection has the least distortion of any other map projection in the middle latitudes, but it exaggerates the size of the land masses near the poles. Think of most world maps you see and most online maps.



A Mercator projection of the world. The purpose of the image is to highlight how a 2D representation of the world is not accurate.

Daniel R. Strebe, CC-BY-SA-3.0

### MGA94 projection

We also use the MGA94, which is an implementation of the Transverse Mercator projection on most of your paper topographic maps (remember them) in Australia. It's based on the GRS80 ellipsoid and provides a high degree of accuracy across Australia. The MGA94 is also compatible with the World Geodetic System 1984, which is used by most GPSs.

In the real world, what does this mean? Let's look at the Overland Track from Ronny Creek to Cynthia Bay (no ferry) ignoring all side trips and going to each hut entrance. These are four different length calculations based on exactly the same line but projected using these different systems.

Projection system	Distance kilometres
Mercator projection	105.29
AMG zone 51	81.86
MGA94	83.99
GDA94	78.78

Using the Mercator projection gives longer lengths as it stretches space more the closer region is to the poles. The other systems give us more realistic values. These other three values are slightly different, none of which affects a walker in a significant way. So which system to use? Tasmap uses GDA94, but will that be the most accurate across the whole state? We know different systems will give different results in different areas, even before we put 3D datums into the mix. There are so many decisions publishers need to make when calculating the length of the walk. No publisher will be aware of all the details of all the moving parts. Computers are great, not perfect, and GIS is much better than running a piece of string or a wheel along a paper map as I did a few decades ago.

### **Human error**

Although not really on theme with the rest of this article, this is still worth talking through. People make mistakes; the more stuff we do the more mistakes we can make. I have seen many simple typos (including on government systems) that need to be corrected, like promoting a 4.1 kilometre walk as 41 kilometres.

Some publishers do not make measurements themselves but instead copy other people's results and tweak them by a few hundred metres to hide the fact they are copying. Then someone might do the same with their modified result. One state national park website even made an "oops" when updating data records that left most of their circuit walks published as half their "actual" length, a 24 kilometre walk said to be 12 kilometres.



I have seen many simple typos ... promoting a 4.1 kilometre walk as 41 kilometres.

We all make mistakes and part of the job of people who publish information like this is to keep improving systems to do more and more sanity checks on data to avoid obviously wrong information.

The most worrying mistakes we can make are due to issues we are not aware of. We do not know what we do not know. Many publishers have no idea how they actually calculate the length; the computer does it. So some people will use an inappropriate map projection that was tested heavily in Queensland, then use it in Tassie. Or perhaps assume that the fancy watch that gives the distance to five decimal places must be very accurate.

### So what?

In most cases, the variations are small and will not impact walkers. However, we need to be mindful that errors are not uncommon. We can do our own sanity checks and ensure we have the capacity to deal with some variations.

But for some people, if their watch tells them confidently that their walk was 20.12545 kilometres, they might lose trust in a publisher who said it was shorter. People new to bushwalking might find it overwhelming as they research a walk to find differing grades, times and lengths.

Consistency can help build confidence. Standards help not only to improve consistency but in developing systems as we have robust conversations and tease out all the issues that actually matter. Then hopefully, settle on a set of standards that are easy to apply and help give bushwalkers more confidence in what they do.

I am not advocating that we develop such a standard now. In Australia, we have two walk grading systems that contradict each other and neither provide the information walkers really need. We have no standard for determining suggested walking times. I think there are other more pressing issues before we work out standards for lengths.

So at the end of the day, as experienced walkers it might be helpful to acknowledge that it's impossible to get the length of a walk "correct", but at the same time, we can say that some lengths are just wrong. It might also help to let our walking buddies know that their pedometer, GPS or step count is not as perfect as they might think it is.

Until we can define what we are measuring when it comes to walking tracks, we can be happy with the idea that a walk's length is generally close enough but never exact. Most importantly, we should smile and know that those ants have to walk much, much further than we do.



In Australia, we have two walk grading systems that contradict each other and neither provide the information walkers really need.



### Meet the **Eastern Bristlebird**

**Text Dominique Potvin** 

In 1962, renowned American conservationist Rachel Carson wrote a book entitled "Silent Spring" after she noticed the birdsong she used to wake up to as a child had been thinning. Its eventual absence had become almost deafening.

This deep dive into one of the tragedies of biodiversity loss eventually became one of the most influential works contributing to changes in legislation and practices surrounding the use of pesticides in the United States, and worldwide.

Its title, however, continues to resonate with many of us: birds (and frogs, insects, and many other animals) seem to announce their arrivals with songs and calls. Their absence becomes notable when the singing stops, and silence takes over.



Eastern Bristlebird (Dasyornis brachypterus) David Cook

Such has been the case in Australia for the under-appreciated, endangered eastern bristlebird (*Dasyornis brachypterus*).

Once common, its numbers have declined so dramatically in the past 40 years that only three populations remain in the central east coast of Australia. The northernmost population, found in southeast Queensland, has as few as 70 birds.

So why should we care about one more, seemingly unremarkable little brown bird in the forest?



So why should we care about one more, seemingly unremarkable little brown bird in the forest?

### Australia's canary in a coal mine

At first glance, the eastern bristlebird doesn't seem like a vulnerable bird. There is nothing too unique about its propensity to nest in clumped grasses or its territorial behaviours. Its song, while beautiful, doesn't stand out in a typical Australian forest or heathland soundscape.

But this small, unassuming bird may be Australia's canary in the coal mine when it comes to fire.

Since the 1980s, researchers have been trying to understand why the eastern bristlebird has seen such rapid decline. Time and again, fire regimes come up as the main factor predicting whether an eastern bristlebird population is stable or under threat. Fire regimes refer to the periods between fires, and their relative intensity and coverage.

While Australian landscapes are generally well adapted to fire, not all fires are created equal. Burn offs often take place without adequate research or knowledge, and at the wrong times. This – along with the increase in fire

frequency, climate change and habitat loss – has contributed to dramatic losses of this species.

Fire can be devastating for many wild animals, but there is something special about the bristlebird that makes it particularly vulnerable to large, frequent fires.

### Its greatest threats

Eastern bristlebirds, despite being able to fly, appear not to appreciate the view of a top story dwelling. They don't choose to live in the canopy, or even on lower branches of trees. Over millennia, the bristlebird has evolved a strong, almost exclusive preference for low, dense vegetation.

This habitat structure is important for many invertebrates and other small animals even less noticeable than the bristlebird, such as spiders, beetles and worms. This means the bristlebird can act like an indicator for how the entire understory ecosystem is doing.

Unfortunately, low, dense vegetation is often the first thing to burn and disappear during a fire. It also appears to take quite some time for bristlebirds to establish themselves again in an area, once a fire has come and gone.

While we often see fire recovery as being green and lush, it can take years for an understory to recover fully and thus support its full community, including bristlebirds.

If fire was the only issue, it might be easy (or, at least, straightforward) to help this species recover. However, because of the distances between populations, the eastern bristlebird also suffers from genetic isolation. This means small populations can be more susceptible to inbreeding, and thus disease or general ill health.

We then compound the inbreeding effects with introduced predators such as cats and foxes, invasive weeds, habitat loss due to agriculture, and general roadkill, and we have a perfect storm of threats.

Isolated, vulnerable populations may only be one fire away from local extinction, signalling a potential collapse of their ground-level ecosystem. This knowledge prompted emergency helicopter rescues of bristlebirds in Victoria to captivity at the height of the horror 2019-2020 bushfire season. This likely saved the species in the state.

In Queensland and New South Wales, the release of captive birds from breeding programs to recovering areas helped bring the species back from the brink.

### But we have reason to hope

All is not lost, however. Captive breeding and translocation (moving individual animals from one population to another, to help boost genetic diversity) programs are in place for this little unassuming bird.

It's important these programs are put in place alongside habitat-based strategies to ensure their success. This includes keeping feral animals away from where birds are released back into the wild, removing weeds and, perhaps most important, slowing fire regimes in certain areas.

Removing invasive species and recovering habitat are important strategies for saving just about every vulnerable native Australian species, from plants, to invertebrates, to charismatic larger animals such as koalas.

The eastern bristlebird may therefore be the little brown bird that could save entire ecosystems. Move over, canaries.



Eastern bristlebird (*Dasyornis brachypterus*), Currarong, New South Wales, Australia JJ Harrison, Wikimedia Commons, CC-BY-SA-4.0

### **Dominique Potvin**

Senior Lecturer in Animal Ecology, University of the Sunshine Coast

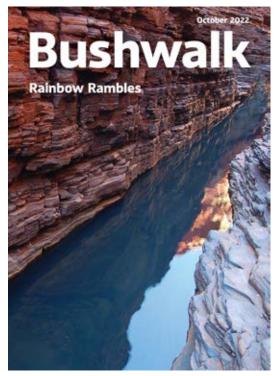
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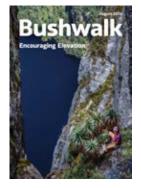


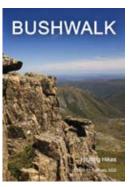
Sunset at Rhona north-north-west



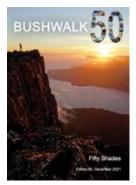














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