



# **Safety Tips of the Week**

**May 2018  
to May 2019  
....with bonus  
episodes to  
May 2020**

**by Mike Nash**



# Safety Tips of the Week - May 2018 to May 2020

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## INTRODUCTION TO UPDATED AND EXTENDED EDITION

These safety tips first appeared from May 23, 2018 to May 14, 2019 in *Ramblings*, the weekly newsletter of the Caledonia Ramblers Hiking Club of Prince George, British Columbia, Canada. Additional episodes were produced in the following 12 months, and are now revised and combined into this single volume. The articles arose from my long-standing interest in outdoor safety. In 2007, I had taken a lifetime of learning about outdoor safety and condensed it into a self-published book, *Outdoor Safety and Survival in British Columbia's Backcountry*. Self-publishing turned out to be a wonderful learning experience and a huge amount of work, in the process of which I gained a better appreciation of the benefits of working with an established publisher. In 2012, therefore, Rocky Mountain Books, publisher of my first book, *Exploring Prince George*, produced an expanded, full-colour edition of the safety book titled simply, *Outdoor Safety & Survival*.

Risks are inherent in backcountry recreation, but are generally no worse than those of everyday living if you take the time to learn how to enjoy the outdoors safely. Gradually learning and acquiring good quality clothing and equipment (as you can afford it and as you gain knowledge) is a better approach than rushing out and buying a complete outfit of doubtful quality that might let you down in the backcountry. If you are new to hiking or to the north, joining a hiking club like the Caledonia Ramblers is a great way to learn from others and to increase your margin of safety as you do so before striking out on your own.

Another excellent resource that we have today is the plethora of online material, a selection of which I have included as links in the articles. Two years ago, before the Covid-19 pandemic seriously curtailed through-hiking, I followed three experienced long-distance backpackers (in real time, on YouTube) as they hiked the many thousands of kilometres of the Appalachian, Pacific Crest and Continental Divide trails respectively. Another YouTube favourite was a Newfoundlander, Justin Barbour, who published documentary-style video series of his 68-day solo-crossings of Newfoundland in 2017 and Labrador in 2018: [Justin Barbour Playlists](#). Barbour in turn was inspired by three worldly adventurers, South African Mike Horn, American Dick Proenneke, and Norwegian Lars Monsen. And so it goes on as each generation inspires the next, as in *the hero's journey* that was popularized by renowned mythologist, Joseph Campbell.

The embedded web links in these blog posts were all validated and updated in October 2021. Dates on which the articles first appeared are included for seasonality.

Mike Nash,  
October 2021.

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## Episode 01 (May 2018) Ageing bear spray

Bear spray has proved to be an effective wildlife deterrent, and is now considered to be essential kit when hiking alone or with only one or two others in bear country. However, it isn't cheap at \$40 to \$50 a can and has a relatively short shelf life of about three years so it's tempting to keep it past its expiry date. One approach to this dilemma is to think in terms of amortising the cost over a three-year planned lifetime (\$15 a year is cheap insurance) and then buy a new canister and discharge the old one for practice in a safe outdoor location well away from people and pets.

The main point for doing this is that an expired canister will likely have lost some of its original effectiveness, especially in shoulder seasons with temperatures dipping below freezing. But there's another reason to replace expired bear spray as I discovered recently. I found an old canister in my basement that had been subjected to the wear of many hiking trips—its expiry date was 2013, five years past its best-by date. So I decided to take it for a final walk in the woods near my home, with the intention of discharging it for practice on my way back.

I picked a safe spot in the trees, well away from people and directed it downwind in the slight breeze. I pulled off the safety tab, imagined a charging bear, and pressed the trigger. Three things happened:

1. The can emptied its contents in a more violent and uncontrolled manner than usual;
2. The trigger jammed open and nearly emptied the can in one burst, and
3. Because of its age, pressure-loss, and explosive discharge, there were only about two seconds of total discharge time.

The consequences were:

1. The loud discharge startled me, and in a real situation might have been enough to alarm a bear into pressing an attack instead of turning away;
2. It nearly emptied in one burst and I would have had almost no reserve in the event I needed it, whereas an unexpired canister should be good for several two-second shots, and
3. As a result of the explosive discharge, I got enough capsaicin on my hands, clothes and face to cause me quite a bit of distress for an hour or so afterwards.

Incidentally, this also illustrates why bear spray should never be carried in the cab of an aircraft or car without an adequate containment vessel.

And for all of these reasons, replace your bear spray when it expires!

## Episode 02 (May 2018) There are cougars around

A news report last week about a long ago cougar fatality in Alberta was a good reminder to be aware of cougar safety while hiking in the outdoors: [There are cougars around](#). One of the triggers for this Canadian Press story was a recent cougar attack south of us in Washington State. The incident is described in this Sierra Club analysis, which includes suggested preventive measures: [Fatal Washington Mountain Lion Attack: The Postmortem](#). A safety item

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that is recommended in the article as an effective deterrent for cougars as well as bears was the subject of last week's safety tip. It's efficient (weight-wise) to carry items that have multiple functions, and bear spray fits that bill as it can be effective against several species. (As discussed last week, replace it by its expiry date and use the expired canister for practice).

To put this in local perspective, while sightings of this secretive animal are uncommon, and aggressive encounters are much rarer still, there are cougars in and around the city of Prince George from time to time, especially in greenbelt areas such as Forest for the World, North Nechako, and outlying rural areas. Judy and I were followed by a large male a few years ago in the woods below our house, and I have several times seen cougar tracks on the late spring snowpack of Sugarbowl Ridge. As you move farther east into the Robson Valley they may be more prevalent. A few years ago I was instructing an outdoor safety seminar at UNBC, when a student shared with me afterwards that her best friend had been killed by a cougar when they were kids. Children are especially at risk in a cougar encounter and should be kept close.

## **Episode 03 (June 2018) Falls while hiking**

We may think of hiking as a relatively safe activity compared to other mountain pursuits such as climbing or skiing. Yet statistics from Europe suggest that falls while hiking on good trails, especially while descending, account for by far the largest number of accidents in the mountains. The summit or other turnaround point is only half of the trip, and extra care is important on the descent when you are tired, going faster because it's downhill, eager to get home, and perhaps complacent with the route. See *'The Science of Why We Fall on Mountain Trails,'* from the May 2018 edition of Outside Magazine: [Why we fall on mountain trails.](#)

## **Episode 04 (June 2018) Unexpected overnigher**

Last week, a group of hikers reportedly spent an unplanned night out in Sugarbowl-Grizzly Den Provincial Park before making their way out the next day. Are you prepared for an unexpected night on the mountain or in the bush when you go hiking, perhaps because of losing the trail or being delayed by weather, injury, equipment failure or other unforeseen circumstance? Does your day pack include extra clothes, raingear, extra snacks and water, compass, map, flashlight, firelighters, emergency tarp, and do you always leave clear information with a trusted contact back in town? Here's a worthwhile mind game to consider before your trip: imagine yourself in such a situation—what is it that you might wish you had done differently as compared to your usual preparedness?

## **Episode 05 (June 2018) 911 calls in remote areas**

This week's safety tip comes from *'The Sharp End,'* a podcast of the American Alpine Club about accidents in North American climbing. At the end of a recent episode, host Ashley Saupe gave listeners three important tips about making 911 calls in remote areas: 1) Even if your cell phone doesn't show any bars, it's still worth attempting a 911 call since all carriers are required to provide free 911 service and another carrier might be able to connect your call; 2) Even if your attempted 911 call never connects, it might still leave information such as time and

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location that is useful to searchers; and 3) if you are connected, immediately tell the emergency operator your location and phone number in case you are disconnected.

## Episode 06 (June 2018) Bear safety training

A week ago I received a query about bear safety training, which caused me to review what I know and what is available locally. The gold standard in bear safety came from the work of University of Calgary Professor Stephen Herrero over the past few decades, and is still relevant today. Herrero (and his colleagues on both sides of the border) don't just present opinions and experiential anecdotes, rather they have undertaken decades of field research and have hard data to back up their advice. Many years ago, Dr. Herrero reviewed and offered suggestions on the bear safety section in the *Caledonia Ramblers'* popular trail guide; plus I have consulted him on other occasions on specific issues. A synopsis of much of Herrero's work appeared in the 2001 instructional video, *Staying Safe in Bear Country*, which takes a behavioral approach to human safety around grizzly and black bears. That 30-minute video is now available online at: [Staying Safe in Bear Country](#) and is still well worth watching. As well, you could read the wildlife safety section in my book, *'Outdoor Safety & Survival'* which is the sum of my bear encounter experiences and learning. Finally, if you want something that is up to date, informative, based on hard research data, and presented with humour and not a little good natured sarcasm, check out this great presentation by one of the top bear experts and a colleague of Stephen Herrero, Dr. Tom Smith. He is presenting to outdoor instructors at the 2012 NOLS (National Outdoor Leadership School) Faculty Summit in Wyoming: [Safety in Bear Country Dr Tom Smith](#). 56 minutes long, it's entertaining, packed with good information, and you are sure to be surprised by some of the myths that are dispelled in this excellent teach-the-teacher presentation. Stay with it to the end, because in the last 20 minutes they take it outside to practice with inert bear spray and a fake bear on wheels!

## Episode 07 (July 2018) How old is too old to hike?

'Safety' is often lumped with the broader term 'Health & Safety,' and this week's tip is about health, fitness and what we can do in the outdoors as we age. There have been many local hiking club members who have continued hiking well into their 70s, 80s and even 90s, some reaching lofty heights such as the summit of Mount Kilimanjaro and Everest Base Camp. Twelve years ago Judy and I met the then 83-year old legendary climber Fred Beckey while hiking on the lower slopes of Mount Assiniboine. Beckey continued to climb into his 90's (he died last year aged 94), and when we met him in 2006 he was still sleeping outside under a tarp and carrying a heavy backpack. With his permission, I documented our encounter in *Outdoor Safety & Survival* (pages 28-30) in the section *'How Old is Too Old?'* Slow and careful on the loose approach trail, his strength and experience shone through when he reached hard rock, at one point offering us a rope. That section climbed, we sat and chatted with him for a few minutes and took pictures; we had reached our high point and as we turned around we watched him continue slowly up the mountain. We later learned that the wisdom of years caused him to abandon his attempt on the *'Matterhorn of the Rockies'* due to loose rock, respecting the need to adapt with age. Fred Beckey (1923-2017): [Fred Beckey](#).



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Meeting Fred Beckey on the lower slopes of Mount Assiniboine in August 2006

## Episode 08 (July 2018) Complacency

One of the safety watchwords, whether in the outdoors, workplace, home, or on the highway is *COMPLACENCY*. This is something that we are all susceptible to, regardless of age or experience. For example, I was handling a fair bit of rough lumber recently on a home project, taking care to use work gloves most of the time. Yet the one time I picked up a single piece of old lumber without bothering to put on a work glove, I got a splinter under a fingernail... ouch! Similarly in the outdoors, each time that you neglect to bring bear spray or a compass might be the one time that you actually need it. Did you watch the bear safety videos linked in episode 6 above? In it, the bear biologist said that one of the most frustrating questions he gets is: "*What should I do if I meet a bear and I don't have my bear spray with me?*" He answered this by equating it to a hypothetical question as to the best way to be ejected from a vehicle if you choose not to wear a seatbelt. The point that he was trying to make is to always carry instantly accessible bear spray when going into bear country, and he wasn't going to take time to answer other hypotheticals if the questioner chose not to do that.

## Episode 09 (July 2018) Offense sometimes the best defense

Several years ago I was out for a Sunday walk, alone, on a forested trail south of Prince George. It was a beautiful spring morning with lots of new vegetation growth as I made my way along the winding trail with hardly a thought in my head. Suddenly, with no warning whatsoever, from around a sharp bend in the trail just a few metres ahead of me came two charging black bears, one behind the other. Their noses were down to the trail and they hadn't seen me. I had no time to think or to process the instantaneously unfolding scene. Instead, my



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body acted instinctively, drawing on millions of years of evolutionary behaviour derived from my ancestors' successful interactions with imminent mortal threats. I threw up my arms and screamed 'STOP!' The lead bear, similarly, had a fraction of a second to instinctively react to my yell before it would have literally run me over. It glanced up, saw me for the first time, and instantly veered left, just brushing past me. Its companion had a fraction of a second more to react, but in any event was following on the heels of the first bear and did the same. I stood there in utter astonishment, and just as I began to process what had just happened, a third bear came charging around the bend and similarly brushed past me at high speed. I was reminded of this incident this week by two related news items. The first was a viral video about a Swedish man scaring off a charging brown (grizzly) bear at very close quarters by means of an instinctive roar. To see the video, just google '*man roars at bear*' and/or go direct to one of the many news feeds that picked it up, e.g. [Swedish man scares off charging bear with a roar](#). The other was a segment on Saturday's CBC Radio *Quirks* show that made reference to this story and goes on to discuss the effects of 'roaring' to effect dominance, ending in a discussion about women's self defense. If you missed it, you can listen to it at: [Animal vocalizations](#). I should emphasize that my reaction to the three bears, like that of the Swedish man portrayed on the video was instinctual and, importantly, worked. However, bear safety is a complex subject and there are likely to be many situations where a different response might be preferred. Therefore, as discussed in other bear safety tips in this document, take the time to learn about bear safety and bear behaviour from some of the many resources referenced.

## Episode 10 (July 2018) Backpacking basics

The peak backpacking season is upon us and it's timely to review what's needed to get into the sport, or for long time practitioners to brush up on what's tried-and-true and what's new. On the tried-and-true side, Alberta-based YouTuber *Martyupnorth* has just published an excellent video on backpacking basics, with a no-nonsense introduction to risk mitigation in the backcountry: [How to backpack in the wilderness - tips & tricks for beginners](#).

For a comparative look at lightweight backpacking in a climate similar to ours, northern Sweden's *Erik Normark* has just released a short video on his philosophy of carrying light, followed by a lightweight gear review: [Lightweight Backpacking in Sarek - The GEAR](#). For Erik's related video of his recent weeklong solo backpacking trip in the mountains of Sarek using this lightweight gear, see: [Sarek Trekking - Solo in the Swedish Mountains](#).

Finally, for a look at ultra-lightweight backpacking that is becoming popular south of the border on long through-hikes, American YouTuber, *Darwin onthetrail* published a final gear review for his hike of the PCT: [PCT Thru-Hike Gear List](#). Note that ultra-lightweight may not be a safe choice in our northern mountains, and certainly not for Canadian winter use.

## Episode 11 (July 2018) Sudden weather change and general preparedness

A few weeks ago, I was with a small group doing a two-hour morning walk in the hills of the North Nechako inside the City of Prince George. The weather was pleasant as we started out, and I was comfortably dressed for the conditions (I thought) in a cotton T-shirt, shorts and lightweight walking shoes with no other gear except for bear spray and a water bottle. There

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was light shower activity to the west as we started out, but it was early in the day for a storm and easy to rationalize that any showers would be light or slide by as they had the previous afternoon. However, an hour and a half later we were hit squarely with a violent thunderstorm as we hurried back down trails that had quickly transformed into torrents of water. My cotton clothes were soaked in minutes in plummeting temperatures that typically accompany thunderstorms, and lightning closed in on us to strike within a few hundred metres. It wasn't a big deal as we were only 30 minutes from the vehicles, but it did get me thinking about the prospect of an incapacitating injury and subsequent hypothermia resulting from a slip on a newly slick trail in the backcountry, or of being struck by an electrical ground current from close lightning. It was a reminder that if this had happened on an exposed mountain ridge, equipped as we were, it would have been a much more serious situation.

A few days ago, Judy and I were approaching the *Snowbowl* campsite on the *Skyline Trail* in Jasper National Park when a sudden thunderstorm arose much faster than expected with a lightning strike in the open wet meadows quite near to us. If this had happened the following afternoon as we crossed the exposed five-kilometre stretch over 8,200 feet elevation between *The Notch* and *Tekarra Mountain* we would have had to practice active risk mitigation. It's astonishing to see lone individuals running the 44-kilometre Skyline Trail in one day with very little clothing, gear or food for an overnighter should it be forced upon them by weather or minor injury. Later that day, four of a group of five novice backpackers dallying behind us made it into *Tekarra* campsite at midnight after one of them had badly sprained an ankle while crossing the high stretch late in the day and had to call for a helicopter evacuation. Fortunately they had a cell signal, which is rare in the Rockies, as the high ridge was within line of sight of the town of Jasper.

Therefore, be properly prepared and equipped as you head into the mountains and learn what to do in a sudden storm. For a lightning safety overview from Environment Canada see: [Lightning safety overview](#).

## **Episode 12 (August 2018) The perfect shot**

The recent tragic deaths of three video-bloggers at Shannon Falls near Squamish is a reminder to all of us to stay alert in potentially dangerous situations in the backcountry, especially when there is a risk of being lulled by idyllic surroundings. I recall two occasions when I have nearly tripped on precipitously-sided mountaintops while trying to set up for a perfect picture, or by incautiously moving too quickly. And last year, Judy and I witnessed two separate incidents of photographers going beyond the protective barriers at scenic waterfalls in Jasper National Park to try for perfect shots. So, enjoy the outdoors to the full but try to maintain situational awareness at all times:

[Three video bloggers dead after accident at Shannon Falls](#).

## **Episode 13 (August 2018) It's never too late to learn new tricks**

I'm deviating this week from the safety theme, unless you consider efficient tent pitching to be a matter of your wellbeing in the outdoors. So, here's the scenario: you've just purchased a brand new lightweight high tech tent, and you're trying to put the space-age tent pegs into the

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hard ground of a provincial park tent pad. You manage to push a couple of pegs into the ground by hand, but the rest are resistant and you reach for a small rock to use as a hammer. You eventually manage to tap or pound all of the pegs into the ground, but not before they start to show inevitable signs of becoming battered and bent. You probably recognise this scenario; it's certainly plagued me over the years, to the point where I carry heavy steel pegs and a carpenter's hammer for front-country car camping.

Recently, however, I had a *Eureka* moment after watching a bushcraft video about batoning. Batoning is a technique where firewood can be split using just a bush knife and a wooden baton which can be as simple as a small two-inch thick tree branch. The key is that the resilient wood absorbs the energy of the blow, avoiding damage to the knife. 'Ah ha,' I thought, '*that might work on lightweight metal tent pegs.*' So I tried this on three recent camping trips with my new tent, and found that not only are the pegs completely undamaged, but that using an improvised wooden baton or mallet instead of a rock causes the peg to inexorably work its way into the ground if that is at all possible. If you should happen to hit an impenetrable rock, you know this right away by the ring of metal on rock and you can reposition. So, as you approach your next backcountry campsite, keep an eye out for a suitably sized piece of wood to use as a baton and enjoy the act of putting in tent pegs at last!

## **Episode 14 (August 2018) Accidents rarely have a single cause – part 1**

Close examination of most accidents invariably reveals multiple causes, triggers and compounding factors. That is why it is essential to keep a mental track of possible issues that might be stacking up against you in the backcountry, and to be increasingly alert and risk averse as the list of potential issues starts to mount. This was brought home to me a couple of weeks ago as Judy and I were starting out on a weeklong, 116-kilometre canoe trip in Bowron Lake Provincial Park.

We were only a few hours into the canoe circuit and had just completed over four kilometres of gruelling portages, hauling the canoe and all our gear over rough trails full of potholes, ruts, roots and rocks, with a two-kilometre paddle in between. We were hungry (first risk factor) and had stopped for a late lunch at the end of the second portage. I had just changed into sandals and bare feet for boat launching, and I no longer had any ankle protection (second factor). It was a very hot day (third factor), and I was tired and dehydrated and probably not thinking as clearly as usual (fourth factor). The final pieces of the near disaster that was about to unfold arose because I needed my pocket knife to spread cream cheese on the lunch crackers, but it was buried in my pack and I was loath to take the time to dig it out (fifth factor). Instead, I reached for a less familiar (sixth factor) belt knife that I was carrying, intending to whittle a small spatula. In my state of tiredness it didn't occur to me that I could have simply used the belt knife to spread the cream cheese (seventh factor). As I cast about for a suitable stick to carve, I had removed the heavy, unfamiliar, razor-sharp, smooth-handled Norwegian knife from its sheath and was holding it loosely in my right hand (eighth and final risk factor). I had not connected the dots and I did not perceive the risk that, in hindsight was blatantly obvious.

In a fraction of a second that came close to ending our trip just hours after it had begun (and possibly worse) the knife slipped from my hand and fell a metre onto my bare ankle. It was so



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sharp that I hardly felt a thing, but when I looked down I was aghast to see a three-centimetre long, deep cut that went through all the layers of my skin to something white underneath. For a moment nothing happened, and then it began to bleed profusely. It was a surgically clean cut and by good fortune it had narrowly missed major blood vessels and wasn't spurting. It would certainly have required stitches if it hadn't happened in the backcountry, but Judy was able to close it with Steri-Strips (surgical wound closure strips which are almost as good as stitches) and copious dressings and bandages. Although it soon bled through the first set of pressure dressings, she re-dressed it and managed to get the bleeding under control. Not quite willing to give up the trip so soon, and daunted by the prospect of reversing the two longest portages of the circuit, we decided instead to camp where we were and to re-assess the situation in the morning. A park ranger happened by in the evening on patrol and supplemented the first aid supplies that we had used. His support and the stability of the wound the next morning encouraged us to go on. It held well during the first critical two days, with the only hindrance being the need to keep it dry, which is challenging for boat launches and take-outs on shallow beaches. But after a few days, I did manage to go swimming on two occasions without a problem, and we successfully completed the circuit six days later. The wound was by then well on its way to healing, with no sign of infection, which had been another concern in committing to go on. The following makes no mention of the incident, but gives a good overview of the trip: [Bowron Lakes](#).

## Lessons learned:

1. When you are not at the top of your game and possible risk factors are mounting up, pay extra attention to what you are doing and the possible consequences of your actions.
2. Carry a good first aid kit and know how to use it. Several people passing by offered to help, but no one seemed to have a good first aid kit with them, with one well-meaning person offering a roll of kitchen paper towels. I used to carry butterfly closures (a less effective forerunner of Steri-Strips) on my long backpacking trips for just such an eventuality but this was the first time I actually had need of them in the field.
3. Ensure that your partner has good first aid skills. I was fortunate in this case with Judy's medical background.
4. Carry or have access to emergency communications. In this case there was an emergency telephone on the lakeshore not far from the accident scene (and others at strategic locations around the circuit), and later that afternoon we paddled down to check it out in case we might need it later on.

## **Episode 15 (August 2018) Accidents rarely have a single cause – part 2**

In episode 14 I described a first aid incident that I had earlier this month on the Bowron Lakes canoe circuit. My aim was to illustrate that accidents generally involve multiple causes and to show why it's important to pay extra attention as risk factors start to mount.

This week I have a follow-up story on the same theme, filmed in September 2016 in New Hampshire's Presidential Range. The protagonist, a video blogger named *Sintax77*, is backpacking in a place renowned for the worst weather in America where many have died even in summer. The video shows progressive risk factors leading to the incident. I've listed

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those that I saw, below, but watch the video (first 20 minutes) first and see how many flags you think are there: [That Time I Hiked with a Broken Face](#).

## My take on it

1. An exposed mountain ridge in early fall with wind and intermittent poor visibility.
2. The central character's main camera malfunctions, introducing some stress as his purpose in being there is to film.
3. Looking for his backup GoPro camera, he realizes that he has left it a mile behind, uphill on a mountaintop. His stress level goes up noticeably as he continues filming with his phone.
4. He makes the decision to leave his backpack with his friend, intending to return alone to look for the missing camera. This is a potentially dangerous action, to separate oneself from gear (and partner) in the backcountry, especially on an exposed mountain ridge in the prevailing conditions. It also likely increased the sense of urgency and stress that he felt to resolve the situation quickly.
5. He doesn't have a first aid kit or any obvious emergency gear with him.
6. His stress level builds as he worries about someone else finding his missing camera.
7. He decides to jog instead of walk back up to the summit over what is clearly very rough terrain.

He has set himself up for trouble which is not long coming. In his haste, he stumbles on a loose rock and takes a header onto a sharp rock that narrowly missed his eye. The fall could easily have caused more serious injuries and possibly rendered him unconscious or unable to move. He had not been alert to mounting risk factors as he sought to recover his camera. At this point his fortunes turn: his injuries turn out to be superficial; he belatedly makes the smarter choice to walk instead of run; he meets other hikers with a first aid kit who clean and dress his wound; he finds and retrieves his missing camera, and he returns safely to his hiking partner and his gear. As in my case, he had been lucky, but if either of us had been paying more attention to the mounting risk factors we would likely have avoided the ensuing injuries and the possibility of more serious consequences.

## **Episode 16 (September 2018) Being prepared for the unexpected**

If you watched my video slides of our recent Bowron Lakes trip in episode 14, above, you will have seen the many large avalanche paths that extend down to Isaac and Lanezi Lakes. I noted in the video that those who ski the Bowron Lakes circuit in winter must be cognizant of the risk associated with these. I wasn't thinking of canoeing when I wrote this, but someone later sent me an article from the Quesnel Cariboo Observer describing an early season canoeing accident in Lanezi Lake resulting from an icefall from remnant winter avalanche debris at the foot of one of these slide paths.

Of the two canoes involved, one was a *Tripper* and one was a *Prospector*. Trippers are designed for flat lake water and are quite a bit faster in that environment, and most of the boats that we encountered on our trip were Trippers. We have a slightly slower Prospector, which is more maneuverable and suitable for both lakes and rivers. In the incident described in the article, with two fairly evenly matched and well-prepared crews, that maneuverability saved the

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day as the Prospector was able to turn faster to avoid being swamped by the ensuing tidal wave and was later able to rescue the Tripper's crew with a canoe-over-canoe rescue. They also had dry clothes and fire lighting gear with them in dry bags and were able to avoid hypothermia. The incident serves to illustrate the importance of being prepared for the unexpected in the backcountry, and especially for rehearsing and practicing 'what if' scenarios. The protagonists in this story were well experienced and had practiced for just such an emergency. You can read their story at: [Safe paddling](#).

## **Episode 17 (September 2018) Enjoy the fall hiking season safely**

September and October is my favourite hiking season. Temperatures are cooler and better for strenuous mountain hiking; the bugs are gone, and fall colours enhance the spectacle of nature at both high and low elevations. Yet every seasonal change brings risks as well as opportunities, and some things to be aware of at this time of year are:

- shortening days - watch your turnaround time;
- sudden storms - increased risk of hypothermia with cooler temperatures and possible sleet and snow;
- grizzlies returning to the high country - carry non-expired bear spray and be practiced and ready to use it;
- more slippery trails from rain, mud, snow and ice - use good boots, trekking poles and check your personal first aid kit – more on that in a future episode, and
- unexpected overnights - carry sufficient clothing and gear for sub-zero temperatures and possible snowfall.

Let someone know where you're going, and as featured in episode 16, above, be prepared for the unexpected. Above all, pay attention and avoid complacency.

## **Episode 18 (September 2018) Backcountry on the wilder side**

Have you hiked the new West Driscoll Trail yet? You don't have to go all the way to the ridgetop to enjoy this trail — just the lower elevation section through the old growth forest is well worth the drive out. I've always felt that the west end of Driscoll Ridge has some of the best ancient forest features of the entire Rocky Mountain Trench (*Exploring Prince George*, pages 122-130) and some of these can now be experienced along this new trail. Built by Caledonia Ramblers Hiking Club members led by Dave King, it is accessed from a new parking lot on the south side of Highway 16 East, eight kilometres west of the main Chun T'oh Whudujut / Ancient Forest parking lot and park sign. After climbing through eye-catching stands of ancient western red cedar, the trail gains a narrow ridge where, last weekend, we were privileged to see the world's smallest carnivore, a *least weasel*. If you continue on to the less trammled ridgetop and crossover hike, consider the cautionary sign at the trailhead:

*“WARNING: You are entering rugged mountain wilderness terrain. Are you prepared? Good footwear, backcountry gear, outdoor skills and fitness level are important. Ability to navigate off trail is essential as the route can be rough and hard-to-follow. This is grizzly and black bear country, and in the winter it is avalanche terrain. Make sure that someone knows where you are and when you are due back.”*



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This is sage advice for all of our backcountry trails, especially as we head into fall and winter.



*Photo M Nash Sept 2018*

## **Episode 19 (September 2018) Pros and cons of using trekking poles**

Like many in the hiking community, I have been using trekking poles for day hikes in steep terrain, and for all my backpacking trips for the past 20 years or so. The correct use of trekking poles reduces stress on knee joints and spine, and can significantly extend the years that you will be able to hike. Like anything, there are some pros and cons, which you can read about in this excellent article from the Union Internationale des Associations d'Alpinisme (UIAA): [Advantages and Disadvantages of Using Hiking Sticks in the Mountains](#). See also episode 78.

## **Episode 20 (October 2018) Always carry a compass**

The best item to have with you in the outdoors in terms of its negligible weight and high safety value is a compass. It needn't be fancy, a basic stand-alone compass is OK, just make sure that it's of good quality. The button-sized emergency compasses that you sometimes find in

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keyrings, knife handles, and other gadgets may not be reliable and can give you varying and inaccurate results, which is not something that you want to have to deal with if you are lost. Even without a map, a good quality compass has great value as it will enable you to walk in a straight line or shoot a bearing to your next target before you lose sight of it in forest or mist. Most areas that we hike in close to town are bounded by roads, rivers, railways and other rights of way, and a straight line walk will enable you to hit one of these. Similarly if you know the general direction back to your vehicle, or at least to the highway that it's parked on, the compass will get you out. Hold the compass away from metal objects such as buttons, belt buckles or pens that could deflect the compass needle and give you a false bearing. Take a map and compass course or buy a good map and compass instruction book and practice. It's fun to do and helps you build awareness of your surrounds; and you'll be glad that you did if and when you find yourself turned around in the bush, or if your cell phone or other GPS device has died.

## **Episode 21 (October 2018) It's time to start thinking avalanche safety**

The Spring/Summer 2018 issue of *Cloudburst* published my article on avalanche safety and snowshoeing (pages 13-14) and the editors promised a follow-up article in the coming Fall/Winter 2018 issue of the magazine. I wrote this Op-Ed after discussing the topic with the leaders of both the Caledonia Ramblers Hiking Club and the Federation of Mountain Clubs of BC: [Avalanche Safety and Snowshoeing by Mike Nash](#).

If you believe that avalanche danger is not a concern until later in the winter with mounting snow packs, think again. Early winter can be dangerous: recreationists can be caught by surprise by wind-deposited snow; and as well, shallow snow packs sometimes combine with early cold temperatures to create unstable temperature-gradient snow. As Avalanche Canada notes in an email announcing the new season, *"if there's enough snow to ride [or ski or snowshoe], there's enough snow to slide."*

What to do? Watch out for avalanche course offerings; bookmark Avalanche Canada's local avalanche forecast website; consider signing up for their daily forecast RSS email feed, and check out the early season blog. As Parks Canada noted in a recent blog: *"Chances are someone will die in an avalanche before winter really begins. Don't become a statistic!"*

## **Episode 22 (October 2018) Surviving a fall through ice**

With the advancing season, some of our higher elevation lakes are already ice covered and others will follow soon. It's timely, therefore, to review this instructive and entertaining two-minute video cartoon on: [How To Survive A Fall Through Frozen Ice](#).

Thinking through what-if scenarios and rehearsing responses to situations before they happen is a key attribute of a survivor. For example, if you are going to walk, ski or snowshoe on lake or river ice this winter, it's not a bad idea to carry something sharp and easily accessible that you can use as a pick. In the opening *Reality Check* in my *Outdoor Safety & Survival* book I relate the amazing story of a well-known local outdoorsman who, fully laden with a heavy pack, feet encumbered with large snowshoes, hundreds of kilometres from help, fell through the ice

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of a remote northern lake on a very windy and cold -32 C day. He had prepared for this moment and had rehearsed what to do, and his first thought as the ice gave way beneath him was “OK Fred, it's happened.” That he survived to relate this gripping tale over coffee in my kitchen nearly 30 years later was testament to his level of fitness, outdoor experience, skill, preparedness, and ability to take advantage of small opportunities in a desperate situation.

## **Episode 23 (October 2018) Avalanche skills training opportunity**

In last week's *Ramblings*, the club announced a Federation of Mountain Clubs of BC (FMCBC) subsidized avalanche skills course that is being offered to Caledonia Ramblers members early this winter. Apart from the safety and possibly life-saving aspects of taking this course, it should be both a lot of fun and rewarding in terms of knowledge gained. If your experience is like mine was, you will remember the camaraderie of the field trip for a long time and you will forever see a mountain snowpack differently. I highly recommend this course to anyone who enjoys snowshoeing or skiing in the mountains.

This course may or may not be subsidized in other years, but is well worth taking regardless.

## **Episode 24 (October 2018) More on expecting the unexpected**

This has been a year of adventures for me, including a near disaster on the Bowron Lakes that I discussed in episode 14, ‘*Accidents rarely have a single cause.*’ As well as multiple causes, some other factors to keep in mind are:

- the greatest risk that we face in our outdoor adventures is likely to be on the highway while driving to and from the trailhead;
- always expect the unexpected;
- maintain situational awareness (and preparedness) to boost your chances of dealing with whatever might arise - stack the odds in your favour; and
- take advantage of any lucky circumstances that often accompany accidents. This last point might seem a bit frivolous, but his good fortune in quickly finding flammable birch bark and dry kindling helped Fred to survive his fall through the ice on a remote northern lake, secondary to his preparedness for, and immediate response to the accident (episode 22).

These five factors all came together for me last week as I was driving back to Prince George on an idyllic sunny afternoon after a pleasant bike ride and walk at Purden Lake.

I had been driving for about ten minutes and I was fresh, alert, and enjoying a straight stretch of Highway 16 a few kilometres west of the Bowron River. There was no traffic in sight, either in front or behind, and conditions were clear and calm. In short, it was as benign and ideal a stretch of road and driving conditions that one could expect. Suddenly, out of the blue and with absolutely no visual or other warning there was a huge impact on my front windshield with the force of a sledgehammer hitting it hard. To give you a sense of its intensity, it was comparable to that of a low-flying Canada goose that I hit on the Island Highway a few years ago at 100 k.p.h. that fortunately missed my windshield but tore off and bent the roof rack. This latest impact, however, was no bird, large or small. I saw nothing incoming or outgoing, and the shattered glass bore no sign of blood or feathers. Furthermore, the glass guy was later able to



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identify a small point of impact in the centre of the mess of cracked glass; and he also confirmed that it could not have been caused by a rock chip even if there had been another vehicle in sight. After eliminating other very unlikely possibilities such as an object falling from an aircraft, or a meteorite, I was left with only one possible explanation: my windshield had been struck by a rifle bullet that, by great good fortune had glanced upward and off the glass. Had it penetrated the windshield, which is apparently usually the case for bullets fired at normal vehicle glass, I likely would not have known what hit me. The RCMP later seemed inclined to conclude that it was a stray bullet related to the hunting season. I'm not so sure that it was stray given its trajectory aligned with the highway and its impact almost dead centre of the driver's side of the windshield; but either way I was extremely lucky that it deflected off the glass. In the image below, you can see where the bullet apparently departed the glass from a secondary shear impact at the top.



Expect the unexpected? There was no way that I could have anticipated this shocking event, but it did emphasize the importance of being fresh, alert and not distracted while driving. Luck also played a part in the bullet not coming through the glass; but as outlined in the Bowron Lakes report, accidents almost always have multiple causes, and if something like this happened, say, to a distracted or tired driver and/or in poorer road conditions, there might have been a different outcome. On the highway, the unexpected can come in many forms, including a mechanical failure (my wife's car has recently been recalled for exploding airbags), a blown tire, an oncoming driver veering across the centreline without warning (I have been faced with this several times), dangerous overtaking (we've all seen that), wildlife leaping out of the roadside ditch without warning, etc. The lessons are to stay alert on the highway, as we do on the trail; to slow down, especially at night and/or in poor weather; and to expect the

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unexpected. This way you are likely to optimize your chances of dealing with whatever might happen. See also episode 86, *Close encounters of the human kind*.

## **Episode 25 (November 2018) Never doubt your will to survive**

Judy and I recently returned from three days in Banff where we attended the annual mountain festival. The highlight for me was attending the live on-stage interview with famed British mountaineer, Doug Scott, and later having a chance to meet him again. He had stayed with me in Prince George many years ago while on a book tour. Now in his mid-eighties, with a lifetime of first ascents in the world's most difficult mountain ranges, he is best known for his traverse of, and bivouac near the summit of *Everest* in 1975 with Dougal Haston (first British ascent), and by his desperate descent of *The Ogre* in 1977 with Chris Bonington. Scott's matter-of-fact description of his eight-day descent of the Ogre with two broken legs, alternatively rappelling, crawling and sheltering from intense storms, takes practical survival to a new level. Not once does he appear to doubt that he would survive, and he is both self-reliant yet dependent on his companions whose skill level and experience for the occasion had to be second nature. Read my full review of *The Ogre: Biography of a mountain and the dramatic story of the first ascent* by Doug Scott in the Fall 2018 issue of *Cloudburst*: [The Ogre Book Review](#) (page 24).

## **Episode 26 (November 2018) More high survival psychology from Doug Scott**

In episode 25 I discussed British mountaineer, Doug Scott's attitude to the extreme situation that he found himself in during his 1977 descent of *The Ogre* with two broken legs. I wrote down some of his remarks during his on-stage interview with Geoff Powter earlier this month in Banff. He said: *"People don't understand the reserves that they have; you've got to be fit to do it; anyone in the situation would have done the same thing; [you must have] partners looking out for each other, similar abilities and experience, must have total agreement and compatibility (even love), you can't have disagreement when you are on the edge; stay cool under fire, do what you can to get out of it, don't panic; the best tools are a long apprenticeship, approach respectfully, and take it easy."* All of this is sage advice from one of the world's preeminent mountaineers who has achieved what few of them do, and survived into his eighties. Just reading Scott's book, *The Ogre*, and knowing what's possible in the direst circumstances may one day help you psychologically if you're in a tight spot in the outdoors.

Incidentally on road safety, if you drive to Banff at this time of the year be prepared for severe winter weather, especially over the high passes at Athabasca Glacier and Bow Pass. On this occasion we drove down in fair weather, which can be spectacular in the late fall and early winter. We came back the long way (an additional 350 km) via the Rogers Pass and Kamloops due to snow and winds closing the Icefields Parkway. Trucks are not allowed on the Parkway at any time other than park service vehicles, and other traffic is generally very light at this time of year; so consequently winter road maintenance (or help if you need it) might not be as timely as on the Trans-Canada or Yellowhead Highways: [The Icefields](#).

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## Episode 27 (November 2018) Key to warm feet in the winter outdoors

Erik Normark's short YouTube video *'Five Cold Winter Nights'* filmed in Muddus National Park in Northern Sweden is worth watching in its entirety, as he produces high quality material with a meditative feel. In this video made last winter, the landscape and temperature depicted is not unlike that around Prince George in January. If you don't have time to view it all, fast forward to 17min 50sec and watch the last two minutes where he talks about, and demonstrates the key to having warm feet in the winter outdoors - great information for this year's snowshoe trips: [MUDDUS - Five Cold Winter Nights](#).

## Episode 28 (November 2018) Avalanche safety course deadline this week

In the right circumstances, avalanches can happen to anyone, anywhere, as illustrated by the Doug Walker and Lindsey Corrigan stories, linked below.

Last winter, in Prince George, we experienced two severe snowstorms with accompanying high winds that could have created dangerous wind slab conditions for short periods of time on escarpments and slopes right in the city. I had miniature 30-centimetre thick slab avalanches coming off both sides of my driveway in the Hart, and it would only have taken a 20 to 30-metre long slope, similarly loaded, to be dangerous. It might surprise you to learn that historically there have been snow avalanche deaths in Toronto's ravine parks, and in the gently rolling hills of England.

Some 25 years ago, I was ski touring in the mountains east of Prince George with a group of friends, and we had almost finished climbing a 460-vertical metre slope that our testing had so far shown to be safe. We regrouped just below the top where it steepened for the last few metres when suddenly, soundlessly, our world was instantaneously rearranged. Confused and looking around, those of us still on the surface saw that several of our companions were partially buried. A quick head count verified that everyone was accounted for, so I took the photograph that stands testament on the inside cover of my safety book as to what can happen when not expected. When you head off into the local backcountry this winter, what knowledge and gear will you take with you concerning avalanche safety?

ANYONE: Doug Walker, the 64-year-old President of the American Alpine Club, died on New Year's Eve, 2015 while snowshoeing near Snoqualmie Pass in Washington State: [Remembering American Alpine Club President Doug Walker](#).

ANYWHERE: Revelstoke resident and experienced backcountry outdoorswoman Lindsey Corrigan got a sharp wake-up call when she was fully buried in avalanche while walking her dog close to town. Her takeaways: *"Never underestimate a slope and just because you're doing something that isn't extreme doesn't mean there's no risk associated with it."* [Burial in avalanche a wake-up call for Revelstoke resident](#).

This week, Avalanche Canada began posting regular bulletins for the 2018-2019 season, as they do at this time every year. As an example, the avalanche forecast for the Cariboo Mountains in our area is 'moderate' rising to 'considerable' by early this week in the alpine. To



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check on current conditions, and for information on how to subscribe to automatic email forecasts, go to: [Avalanche Forecast for the Cariboos](#).

Safety group urges planning, training, proper tools for avalanche safety: [CBC Report](#).

Mountain skills article in Backcountry Magazine: [Take the Time to be Prepared](#).

## **Episode 29 (December 2018) Bear safety is an ongoing concern in winter**

Last week's tragic incident in the Yukon in which a young woman and her infant child were killed by a grizzly bear is a sharp reminder that bears are not true hibernators and can be active at any time of the year. This might be an added concern in poor berry crop years and/or with increasingly mild winters, both of which are applicable this year. Another factor is that bears that are active late in the season usually haven't been able to put on enough weight to make it through the winter. According to one bear biologist, in the aftermath of last week's double fatality, *"This is not terribly well-documented in the scientific literature, but it's very well-known to northerners ... a bear that's out late is hungry, it's gonna cause problems. It's bad news."* So, be cautious around bears that appear to be malnourished, especially in the winter.

While bear spray is always a worthwhile deterrent to carry, it might be less effective in cold temperatures and/or if it has passed its expiry date; and it is no guarantee at any time, especially if the bear's momentum carries right through the cloud of spray. Such was the case for Todd Orr, an experienced outdoorsman who survived a double grizzly bear attack in Montana in early October 2016, and in this video he shares his life-saving survival tips from the experience: [Surviving A Double Grizzly Attack](#).

Many jurisdictions now mandate the use of bear resistant containers for storage of food and other scented items for backpacking and camping. But 'bear resistant' does not mean 'smell proof,' and it's still important to store it well away from your tent at night. Have you ever wondered who and what determines how gear gets its 'bear resistant' tag? Here's the answer from Adventure Journal: [How Bears Decide If Gear Deserves the 'Bear Resistant' Tag](#).

## **Episode 30 (December 2018) Trip safety is everyone's responsibility**

During a recent club trip, a novice hiker had trouble with inadequate footwear and clothing on a six-hour hike in wet and snowy early winter conditions. This resulted in cold, wet feet and early stage hypothermia before the hike was halfway done. Some take home lessons were:

1. Inadequate footwear, clothing, gear, or conditioning for a hike is best caught at the start of the trip. It is important to speak up if you see something that you are uncomfortable or unsure about. In this instance, several people later said that they wished they had spoken up sooner. Safety is a shared responsibility, especially in a volunteer-run club like the Caledonia Ramblers.
2. One of the hardest things that a trip leader has to do is to turn someone away; but occasionally it is necessary to do so in the interests of both the individual and the group.

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However, such things are seldom black and white, and if it is decided to include a person whose gear or ability to safely complete the hike is in doubt, it should be a group decision because the group as a whole may be impacted.

3. Most accidents result from a chain of events, so be alert to what's developing and take action early. A conservative response in this instance would have been for some or all of the group to have turned back with the casualty when first becoming aware that he or she was wet and cold. This would have avoided pushing on into less trodden, deeper, brushy snow, entailing extra hours of exposure and risk of injury to an already partly hypothermic person.

4. Interventions should be assertive, especially with a hypothermia case where judgement can become gradually impaired. In this case the interventions were assertive and well handled by several trip participants who had medical and rescue training. It took a surprising amount of contributed clothing to warm the person up, and fortunately others in the party were well-equipped and able to do so. This is also a reminder that the most important items in your day pack are raingear and extra clothing. Staying dry and warm is paramount, and having extra clothing to be able to assist others is important for group safety.

5. Keeping a mildly hypothermic person moving is OK if they are dry and have sufficient clothing and energy reserves to slowly build up their body temperature. If their temperature continues to decline, it's essential to stop and take whatever actions are necessary to warm the person up before continuing. It's also generally best to keep a group together, especially when someone is already in trouble.

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When you sign up for a guided outdoor adventure it is in your best interest as well as your guide's to fully understand and double check all the safety procedures, as illustrated in this 'Swiss Mishap' where both guide and client failed to check that the client's harness was clipped in: [Swiss Mishap](#).

This hang-gliding accident could have been much more serious, as happened in BC a few years ago. A key factor in the mishap must have been *complacency*, which is the biggest killer in the outdoors. Don't blindly depend on the leader or guide: *your personal safety is your responsibility, and group safety is everyone's shared responsibility.*

## **Episode 31 (December 2018) Balloons that go bang in the backcountry**

This safety tip is a bit unusual, but it's an interesting piece of history and who knows what you might *stumble* across in the backcountry?

Twice in my four decades of roaming our local mountains I have found the remains of weather balloons. In the first instance, 'stumble' was the right word as I literally tripped over a thin but strong para-cord that was hidden in dense alpine vegetation on a solo bushwhacking approach on the north side of Caledonia Mountain. Following the cord for several metres led me to a delicate milk carton sized payload of instruments and electronics. Not sure what to do with it

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(there were instructions on the side but they were in French) I took it home and translated it to read: "...*please DO NOT return to the weather office!*" After a bit of research I learned that several of these disposable devices are launched every day from the Prince George airport to record and transmit weather data as they ascend into the upper atmosphere; and that they definitely don't want them back. The prevailing winds carry many of them over our mountains where they eventually fell as litter. Apart from the environmental impact over time of many thousands of these things landing in the mountains and the minor trip hazard that I experienced, they can hardly be considered a hazard (except perhaps to small critters), plus they do serve a worthwhile safety purpose in providing valuable weather information for aviators and others. But not all balloons in the backcountry were so benign.

During World War 2, Japan launched more than nine thousand 'Fu-Go' fire balloon bombs towards western North America. Armed with incendiary and fragmentation bombs the campaign was intended to have a large psychological impact on the U.S. and Canada, and cause huge damage and tie up resources by starting west coast forest fires. It succeeded in the first objective, but not so much in the latter because the forests weren't dry enough in November onwards when the jet stream was right for launching. Much more concerning was Japan's original intention (fortunately vetoed by the Emperor) to arm them with biological weapons. The fire balloon campaign had one unintended consequence in that the forces and procedures established to combat the expected forest fires went a long way, for better or worse, to shaping post-war forest fire fighting regimens.

There were seven known fatalities resulting from the fire balloons: one person died fire-fighting, and tragically five children and a pregnant Sunday school teacher were killed when a balloon that they had found exploded on May 5th 1945 in Southern Oregon. Balloon payloads landed from Alaska to Mexico and as far inland as Nebraska, Saskatchewan and the Northwest Territories. Some ten per cent of the fire balloons launched were thought to have reached North America and 300 are known to have been found or destroyed, leaving more than 600 unaccounted for, presumably in remote backcountry areas. The most recent one to be found was only four years ago in October 2014 when forestry workers in British Columbia found an unexploded balloon payload that was later detonated by a Royal Canadian Navy ordnance disposal team. That raises the possibility that, like the remains of the weather balloons that I found, there could still be other unexploded fire balloons out there in BC's backcountry. So, in the very unlikely event that you should stumble on the remains of something that looks like the picture below, stay clear and contact the authorities. You can read more about this fascinating piece of local wartime history at: [Fu-Go balloon bomb](#).



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## **Episode 32 (December, 2018) Post traumatic stress injuries in the outdoors**

One of the best outdoor safety podcasts that I came across in 2018 was *'The Sharp End'* from the American Alpine Club. Based on the AAC's highly-respected annual publication, *'Accidents in North American Climbing'* its purpose is to help mountaineers learn from others' experiences and mistakes. Although aimed primarily at climbers, many of the episodes have lessons relevant to all of us who recreate in the mountains, for example: Episode 25, *'The Deadly Hole on Aasgard Pass'*; Episode 18, *'Epic in Yosemite National Park'*; and Episode 17, *'The Survivor.'* The recent episode 35, *'The Aftermath,'* looks at the often overlooked effects of post-traumatic stress injuries on survivors of avalanche or other outdoor accidents:

[The Sharp End Podcast](#) and click on *Episodes*.

## **Episode 33 (January 2019) Winter layering**

As we head into January and the severest part of the winter, here's another short piece from Sweden's Erik Normark. Erik appeared in episode 27 with his video *'Five Cold Winter Nights'* filmed in Muddus National Park in Northern Sweden; and yes, he did read and reply to this safety tips column that week because I sent it to him! His latest short work is titled *'Dressed for Extreme Winter - Layers Explained'*: [Dressed for Extreme Winter - Layers Explained](#).

## **Episode 34 (January 2019) Hypothermia**

Several times in 2018 I cited *'The Sharp End,'* the American Alpine Club's excellent *'Accidents in North American Climbing'* podcast that is designed to help mountaineers learn from the experiences and mistakes of others. The latest episode is relevant to anyone who spends time in the outdoors: [Episode 36: Hypothermia!](#) Don't be deterred that this is about ice climbing. The

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fundamentals of the incident involve a three-hour snowshoe and ski trek in negative 25C temperatures just south of Lake Superior. What is significant about this is that it involved four experienced, fit, outdoors people: three men and a woman; three on snowshoes and one on skis. What followed came close to taking a life, and could just as easily happen on a snowshoe or backcountry ski trip around Prince George.

I won't repeat the details of the incident (you can listen to the full podcast if you wish), but I will summarise the key lessons learned:

1. Think of how much food and water you might need for a day-trip in extreme winter cold, and double it. Keeping hydrated and well-fed will allow you to generate heat through exercise.
2. Get a mildly hypothermic patient (shivering, poor coordination, difficulty with fine motor control) to do basic rewarming techniques: replace wet with dry clothing; put on layers to ensure maximum insulation; eat and rehydrate to create energy; do some kind of exertion to use that energy to create heat.
3. If hypothermia has progressed beyond a mild state, it will most likely manifest as an altered mental state, which is a really bad sign in wilderness medicine regardless of the cause. If it is a result of moderate hypothermia, you must take action to aggressively rewarm the patient: insulate them from ground; further insulate them by wrapping them in a reflective layer and whatever insulation is available; consider using a stove to create a warm water bottle for the armpits and groin to actively rewarm. [Severe hypothermia is a whole other story requiring urgent medical attention, so don't let it progress that far].
4. Bringing a small stove does not add much weight and adds a lot of safety for both hydration and warming in severe winter cold.
5. Store any water bottles that you are carrying upside down in your pack to delay the water freezing in the neck of the bottle.
6. Eating snow to counter dehydration is a really bad idea. It puts ice in your core and further dehydrates you as you use more water to melt and heat the snow than you get from consuming the snow.
7. Avoid alcohol on the trail: it has a double negative effect of giving you a false sense of warmth, while causing peripheral vasodilation that will cool you more quickly.
8. Prevention is the best course: avoid heat loss, stay dry and insulated, don't sweat by having on too many layers while exercising; eat and drink in order to have enough energy to create heat.
9. Pay attention to the condition of your companions; for example, just because someone in your party is normally a jokester, don't just assume that they are OK now.
10. Stay together as much as possible. This might require more fully understanding and better communicating the seriousness of the situation.
11. If you do activate an emergency communication device, don't expect an immediate rescue; such things take time to organize and execute. Be prepared to help yourselves for as long as it takes.
12. Recognise that it can be impossible for a small number of people to physically carry out an unconscious or incapacitated person who can't support his or her own weight, especially in snow. One of the people involved in the incident had taken a six-day mountaineering course, including crevasse rescue, but not once had they practiced moving an unconscious patient.

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13. Be assertive re the need to carry extra resources, especially in very cold conditions. Had they taken full camping gear and food with them, as one member of the party had wanted to do, they would likely have been OK. When undertaking a seven-hour round trip snowshoe in these conditions, being prepared for an unexpected overnigher takes on added significance.

If you don't listen to the entire episode, I do recommend the last ten minutes, from the 35-minute mark. It is by an emergency medicine physician specializing in wilderness medicine. He briefly discusses hypothermia: what it is, what it looks like, and what to do about it.

## Episode 35 (January 2019) Avalanche course timely

The Caledonia Ramblers' first recreational avalanche course is fully subscribed and is set to go ahead this coming weekend. Kudos to members who signed up to help make it a success - you will gain a lot from it and will likely remember it for a lifetime. Collectively the club will gain a lot of new avalanche safety awareness.

The course is timely with the recent avalanche deaths in BC, and because we are now in the depths of the 2018-19 avalanche season. According to the Alpine Club of Canada's 2018 *State of the Mountains Report* (pages 19-21), since 1980 more than 446 people have died in avalanche accidents in Canada. Over 70 per cent of these fatalities were in British Columbia, and over 90 per cent were backcountry recreationists who were not being professionally guided and who were therefore making their own decisions. Of these, 50 per cent were snowmobilers, 23 per cent backcountry skiers, 5 per cent out-of-bounds skiers and 22 per cent other winter backcountry activities. (The full report is available under the 'Environment' tab on the ACC website: [State of the Mountains Reports](#). To download the full PDF: [State of the Mountains Report May 2018](#).)

## Episode 36 (January 2019) More on avalanche safety

Here is a link to the U.S. Forest Service's Northwest Avalanche Centre's accident summaries for 1997-2019: [Northwest Avalanche Accident Summaries](#). It makes sobering reading and supports the Caledonia Ramblers' and the FMCBC's push for more avalanche safety awareness for mountain snowshoeing. In reviewing these summaries for the last 21 years, there were no less nine separate incidents in the U.S. Northwest involving snowshoeing, and in five of those incidents a snowshoer died. The case of Doug Walker is particularly instructive, given his high level of experience. His death on Granite Mountain was mentioned in episode 28, with a link to an article in the *Alpinist*. According to that article, Walker was president of the American Alpine Club at the time of his death, as well as his high profile as an outdoorsman, entrepreneur and philanthropist. Some related Links are:

- [Granite Mountain Trip Report](#)
- [Seattle software pioneer dies in Granite Mountain hiking accident](#)

Also, here are some recent avalanche-related links from the Alpine Club of Canada's weekly newsletter that are worth checking out:

- [Know Before You Go](#)



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- [Avalanches in Canada: Understanding and Mitigating the Risks](#)
- [Electronic interference with a beacon in search mode](#)
- [Trip Planning](#)

## **Episode 37 (January 2019) Situational awareness**

*'Into the Storm: Two Ships, a Deadly Hurricane, and an Epic Battle for Survival'* by Tristram Korten (published in 2018) is the parallel story of two cargo ships, the *Minouche* and the *El Faro*, both caught in Hurricane Joaquin in September 2015, and both lost at sea. It's the story of two crews, one of which perished and one survived, and of the U.S. Coast Guard Search and Rescue Operations and their rescue swimmers.

The book shines a light on the differing approaches and responses to the storm by the two captains and their crews, and the respective outcomes. Of key importance was maintaining situational awareness and being prepared to react accordingly. An important factor was the willingness and ability of a crew to question, and if necessary to challenge the decisions of their captain. In aviation (the 'gold standard' for safety practice) this risk factor has largely been eliminated by the universal training for, and implementation of crew resource management, or CRM for short. It appears that the marine sector has some catching up to do in this regard. Similarly on a hiking trip, it's important for trip leaders to both maintain situational awareness and to be open to concerns and suggestions from participants.

*'Into the Storm'* discusses the enemies of situational awareness: "...*complacency, ignorance, personal bias, fatigue, stress, illness, and any other condition which prevents the [leader and] team members from clearly seeing and assessing the situation.*" If this sounds familiar, it's all relevant to safety in the outdoors.

## **Episode 38 (February 2019) Take care on or below cornices**

Further to recent discussions about avalanche safety, club members sent me these pictures of a cornice collapse that they photographed last spring. They were on Boulder Mountain and came across this scene where previous hikers had walked along the cornice, perilously close to where it had fractured:

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*Photo: Chris and Shauna Terai*



*Photo: Chris and Shauna Terai*

It's important to realize when skiing, snowshoeing or hiking on a corniced ridgetop that cornices sometimes have a considerable overhang that may not be apparent from above. Several local outdoorspeople have had very close escapes when they either fell through a hidden, snow-covered cleave in a cornice, or caused a cornice to break off entirely. Some of those people were club members, and most were highly experienced in the outdoors.

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It's not uncommon for a cornice to extend many metres away from solid ground; for example, look at the large cornice near the summit on the top left of the first picture. Apart from the danger of falling through a hidden crevasse created by a cornice that is slowly cleaving off the mountain, or outright triggering a cornice collapse and potentially going down with it, a falling cornice can also trigger an avalanche on the slopes below. This is especially concerning after prolonged winds have built up cornices on the lee sides of ridges, at the same time loading the slopes below. As an example of the caution needed, *The Mountain Knows No Expert* has a photograph on page 147 of the long belay line used by late club member George Evanoff as he places dynamite charges along a cornice in the Table Valley while doing avalanche control work for BC Rail. Two club members, in unrelated incidents, have fallen through crevasses in cornices when exiting helicopters on ridgetops and were only saved by hanging onto the helicopter landing skids until they could be pulled clear (true story!)

Cornice hazards typically extend into spring and early summer in our local mountains. In June and July (depending on elevation and weather) cornices start to collapse of their own accord as the sun's heat weakens the snow, and they can be a danger to hikers above or below. As an example, I once went on an unplanned overnight backpack on Mount Terry Fox on a July long weekend after failing to get a permit for the nearby Berg Lake trail. In the late morning of the second day, cornices began collapsing above us while we were contouring around a mountain, forcing a retreat from our intended travel route. More recently, here's an example of remnant cornices about to fall down that I photographed in July 2017 from Little Shovel Pass on Jasper National Park's Skyline Trail:





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## Episode 39 (February 2019) When and how to call for help

The latest episode of the American Alpine club's *Sharp End* podcast deals with when and how to call for rescue in the backcountry: [When And How To Call For Help](#). It's worth listening to in its entirety, but here are some highlights:

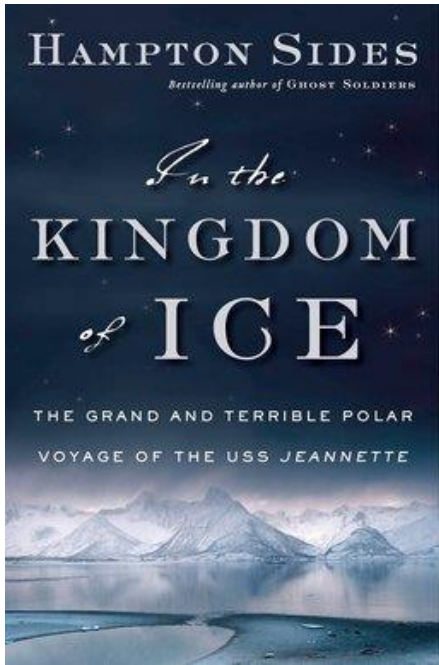
- People venturing into the backcountry should be prepared as much as possible to self-help if they run into problems. Emergency satellite communications devices should be a last resort in case of trouble, not a first resort.
- A call for rescue should only be made after thinking things through carefully, and after efforts to self-help have been exhausted. At the same time, if there is a dire need for help, the call should not be delayed.
- Before making the call for help, prepare what you are going to say and write it down so that you can deliver it quickly and succinctly. If you are making a two-way satellite phone or cell phone call, assume that that call will be dropped and you have to get out the essential information in the first 30 seconds (the episode includes a role play as to what this might sound like). This brief picture that you should be ready to give in that first half minute will likely include:
  - State that this is a backcountry emergency (to help cut through unnecessary in-town questions that a 911 operator might normally ask), and state that you need assistance.
  - Give your name, call-back number, and location in case the call is dropped.
  - Briefly state the nature of the emergency, and if it is a medical problem the status of the patient/victim, and any key medical history.
  - Briefly state the experience and assets of the group.
- After the call, it is important to stay put where you are. Make an effort to be really visible (movement and colour stand out from the air). Make noise for the benefit of an approaching ground crew. A whistle is a lot less tiring over a long period of time than shouting.
- If you expect a helicopter, be aware that the first flight may just be 'eyes on' to survey the scene and decide what resources are needed; don't be dismayed, therefore, if the helicopter flies around and then goes away.
- Prepare for helicopter arrival, if necessary by moving a short distance to an open area - 30 X 30 metres of reasonably flat ground is a good minimum. Secure all gear from the effect of rotor wash, especially anything weighing less than 22 kilos (50 pounds).
- BE VISIBLE, BE LOUD, BE FOUND!

Although this episode was made specifically for the U.S., much of the detail about how search and rescues are managed, and the role of rescue coordination centres is the same for Canada.

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## Episode 40 (February 2019) Extreme survival: stories of what is possible

Historical accounts of survival in extreme circumstances can provide useful information and make interesting reading; but perhaps more importantly, can serve to illustrate what is humanly



possible in difficult and prolonged life-threatening situations. While there are always other factors that come into play, having a good attitude in a survival situation (the psychology of survival) can make the difference between living and dying. In *Outdoor Safety & Survival, Appendix A, Lessons of History, an Annotated List of Classic Reading*, I listed some of my favourite stories that go far beyond anything that most of us are ever likely to experience. If we should ever find ourselves in a tough spot, these accounts can help bolster the mental fortitude that we will need through knowing about those who experienced far worse circumstances. A recent book in this genre is: *In the Kingdom of Ice: the Grand and Terrible Polar Voyage of the USS Jeannette* by Hampton Sides (Doubleday, 2014). Not everybody survived this epic story of 19<sup>th</sup> Century Arctic exploration, but many did, and the account is a testament to great leadership and the will to live of all the expedition members as they went through nearly unimaginable ordeals.

## Episode 41 (February 2019) Snowshoes can be a tripping hazard

Here's a safety tip that might seem obvious but which, earlier this winter season, the BC Forest Safety Council felt sufficiently worthwhile to issue a warning to workers about snowshoes as tripping hazards: [Snowshoes can be a tripping hazard](#). The alert was based on a close-call incident that happened to a local forestry worker four years ago this spring. So, as we near the end of this snowshoeing season, and eagerly look forward to simply lacing up our hiking boots, that old bug-a-boo, complacency, is waiting to rear its ugly head, especially as snow conditions become marginal with the spring melt.

The consequences of tripping while hiking or snowshoeing can range from momentary annoyance or embarrassment to ruining an outdoor season with a sprain or broken bones, as a number of local people can attest to this winter season. More serious consequences can include impaling on a sharp branch or falling from high ground. A few years ago, in a moment of undue haste, I made an unnecessary and incautious move while descending the rough upper part of the East Driscoll Trail and slightly twisted a knee. It didn't seem much at the time, but I paid for that with painful knee problems while hiking on steep terrain for the next two years. I can think of several other serious accidents or near misses that happened to hikers locally. In episode 3, I reported that statistics from Europe suggest that falls while hiking on good trails, especially while descending, account for by far the largest number of accidents in the mountains. From Outside Magazine: [The Science of Why We Fall on Mountain Trails](#).

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Risk is present whenever we walk on icy or rough terrain, and snowshoes can increase the hazard. So, stay alert and don't let late-winter complacency ruin your upcoming hiking season: [Incident Summary Safety Alert](#).

## Episode 42 (March 2019) Making sense of snow stability tests

The Caledonia Ramblers' umbrella organization, the Federation of Mountain Clubs of British Columbia (FMCBC) has several possible avalanche safety initiatives underway for next fall, so stay tuned for those. The FMCBC's actions are partly in response to initiatives taken by members of this club, including the club's first ever recreational avalanche safety course, and are certainly highlighted by the tragic death of a snowshoer in Mount Seymour Provincial Park a couple of weeks ago. In the meantime, here is an excellent backcountry education piece on snow stability tests and how they fit into tour planning: [Making Sense of Snow Stability Tests](#).

## Episode 43 (March 2019) Choosing between avalanche safety and an angry grizzly bear

The adage to "*expect the unexpected*" took on special meaning for a group of backcountry skiers in Kananaskis recently. Risk management in the outdoors is about weighing options and making wise choices. Bear safety was far from mind for this group of six skiers as they embarked on what they thought was going to be a gentle ski tour on a cold minus 25 Celsius morning. Inadvertently skiing past the entrance of a grizzly bear den, however, they disturbed the occupant, who was rightfully annoyed. As their world suddenly turned upside down, they had to make a stark choice between avalanche safety and an upset grizzly bear: [What are the Chances](#). Grizzly bears are not true hibernators and can be active in any month of the year, especially as we head into spring. If you run into a similar situation in Sugarbowl-Grizzly Den Provincial Park, for example, what choice would you make? Are you prepared for the unexpected whenever you are in the mountains?

## Episode 44 (March 2019) Takeaways from 2018 mountaineering accidents

The American Alpine Club and the Alpine Club of Canada publish an annual report on accidents in North American climbing. The focus is on helping to make everyone safer in the outdoors. Recently, they released the written report for 2018: [Takeaways from Canadian Mountaineering Accidents in 2018](#).

While these reports are mostly about climbing accidents, they can help increase general safety awareness in the outdoors. As well, there may be direct overlaps, such as when hiking strays into borderline mountaineering. Over the years we have had a few situations arise where we wandered into this territory. An example was on the club's first hike on the newly renamed Mount Trudeau near Valemount in August 2006 when we had a completely avoidable near-disaster with rock fall. There were several take-home lessons from that incident that I wrote about in *Outdoor Safety & Survival*, pages 113-114.

From this *Takeaways* article, some things that are relevant to both climbing and hiking are complacency, rock fall, doing adequate route research, and scrambling into potential traps. I encourage you to read the blog and think about any near misses that you might have had in



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the past, and how you might approach situations differently in the future. From the American Alpine Club: [Accidents in North American Climbing](#).

## Episode 45 (March 2019) Backpacking basics

Are you new to backpacking, or would you like an up-to-date refresher? Jessica Mills, who goes by the trail name Dixie, last year completed the triple crown of the Appalachian, Pacific Crest and Continental Divide trails and has just produced an excellent 14-part series on everything that you need to know about backpacking. The episode themes are: shelters, sleep systems, footwear, clothing, insects, water purification, food and cooking systems, electronics, first aid, hygiene, weather, ten essentials, packs, and a backcountry camping basics wrap-up. The presenter is an engineer by profession and brings that discipline to her presentations, which are up to date with the latest on lightweight gear and are underwritten by three years and thousands of miles of hard-earned practical backpacking experience. Jessica's play list: [Everything You Need To Know To Start Backpacking](#).

## Episode 46 (April 2019) The bears are awake!



The first black bear sightings of the year have been reported in the Rocky Mountain National Parks, and it won't be long before we start seeing them around Prince George, especially with the warm weather that we've been getting. Parks Canada are reminding visitors to make noise, travel in groups, and carry bear spray, and they have provided this excellent two-minute refresher on the use of bear spray: [How to Use Bear Spray](#).

For the upcoming backpacking season: [Three Easy Ways to Hang a Bear Bag](#)

## Episode 47 (April 2019) Backcountry evacuation

Have you ever tried to carry somebody out of the backcountry? I had to do this many years ago during a search and rescue exercise and I can attest to its difficulty. It's much harder than you might think, even with a good-sized group of strong people on relatively easy ground. In the mountains, it can be nearly impossible for a small party to manage successfully if the victim is not at least partly mobile. During the Fang Mountain rescue near Prince George in October 2009, it took a party of some 50 trained rescue personnel over four hours to bring the casualty, who had been critically injured in a cave by rock fall, just partway down the mountain through the night, from the cave entrance to a place where a military night-flying helicopter could pick him up.

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On snow there may be other options if you can improvise a sled, but it should still be practiced before you need it. Here are some tips from *Backcountry Access*: [Backcountry Evacuation](#).

## Episode 48 (April 2019) Learn to love snow camping

It's not too late to go snow camping this spring. In fact, this is the best time of the year as overnight temperatures moderate, nights become shorter, and the higher elevation mountain snowpack continues to accumulate into late April. Here's how to do it comfortably and safely: [Learn to Love Snow Camping](#).

And while you're out there enjoying the spring mountain snow, don't get complacent about late season avalanche danger. I follow Avalanche Canada's daily bulletin, and after gradually moving down into a safe rating almost across the board, lately it has been edging back up with some 'moderate' and 'considerable' ratings.

Here's an excellent article: [We can send a robot to Mars but we can't predict an avalanche](#). Embedded within this article is the best short video introduction that I have seen on the North American Avalanche Danger Scale: [Avalanche Danger Scale](#).

## Episode 49 (April 2019) Are hikers too reliant on smartphones?

The smartphone is a great piece of safety gear to have with you if you are hiking in a place that is likely to have service, such as Vancouver's North Shore mountains. It is less reliable, although not entirely so, in the Prince George backcountry (see episode 05, *911 calls in remote areas*). When Search & Rescue personnel respond to a backcountry emergency, they would much rather have direct contact with the subject than not. The problem is that some hikers are too reliant on their phones or satellite communicators as their first line of defense instead of as a last resort.

Over-reliance on a phone might mean that you are not adequately equipped with gear and the knowledge to avoid getting into trouble in the first place, or to help yourself if you do. As well, many hikers use smart phone apps for navigation purposes, and these might not always be sufficiently accurate for Canadian conditions, especially in steep, fast-changing and unforgiving terrain such as BC's North Shore mountains. Anyone who has wandered off trail and tried bushwhacking down a mountain will know how easy it is to get drawn into steep-sided gullies and other terrain traps that can be hard to get out of or lead you kilometres off course. Locally and as unlikely as it might seem, the subalpine zone on the Raven Lake trail in Sugarbowl-Grizzly Den Park is one such place, which I can attest to from personal experience on more than one occasion. The following interview with a founding member of North Shore Rescue discusses some of these issues: [Hikers too reliant on smartphones](#). For more about BC's leading volunteer rescue group see: [North Shore Rescue](#).

Another side of this story, however, is that long-distance hikers on established trails south of the border are making increasing use of smartphone apps for navigation purposes. Jessica (Dixie) Mills has a thoughtful overview of her experience navigating on the Pacific Crest and Continental Divide trails: [How I Navigate On a Thru-Hike](#). On such trails, electronic navigation

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tools are clearly replacing traditional map and compass. However, I do stress the importance of learning and practicing map and compass navigation regardless of whether it's your primary means of direction-finding or whether you are carrying paper maps. It's important knowledge to have in the event that your GPS device fails or the GPS system itself falters, for example during peak solar activity, and it will give you greater situational awareness and help you to better read your topo maps in whatever format you have them in.

It's also worthwhile carrying a small, good-quality compass with you on every hike (see episode 20, *Always carry a compass*). It weighs almost nothing and takes little space but has considerable utility even without a map, e.g. shooting a quick bearing before stepping off trail so that you can find your way back by simply reversing that bearing; or by walking a straight line which will get you out of most situations if you have a reasonable awareness of the surrounding geography. Finally, a map and compass are still essential tools to have with you in the backcountry away from established trails, especially in Canada's North Country.

## **Episode 50 (April 2019) Mountain lion and other wildlife safety tips**

In the early 2000's when I was instructing an outdoor safety seminar at UNBC for students and staff doing field work, a student came up to me during a break after a segment on wildlife safety and told me that one of her best childhood friends had been killed by a cougar. Unsurprisingly, that moment turned what had been a largely academic discussion into something much different. It also caused me to reflect on a close personal friend and long-time hiking club member and FMCBC Director, George Evanoff, who had died in a grizzly bear encounter near here only three years earlier.

A few years ago, my wife and I were followed closely by a large male cougar in the wooded greenbelt below our home in the Hart area of Prince George. We didn't fully realize it at the time, but the tracks told the story when I returned an hour later with my camera to photograph them. So, large cats do sometimes venture inside the city. Recently, while driving home from a hiking club social, we were surprised and privileged to get a glimpse of a good-sized cougar off to the side of Foothills Boulevard. Mark Nielsen wrote about this on the *Citizen* front page on April 2 2019 in a story that included some great common sense rationale from a Conservation Officer: [Big cat seen roaming Pidherny-Hart](#). Since the story appeared, a local physician returning home at 2 a.m. from a call-in saw a large cougar walking along a street in our neighbourhood.

During her recent through hike of the Continental Divide Trail, Jessica (Dixie) Mills had several encounters with grizzly bears while hiking alone, and perhaps more seriously with a mountain lion, which she discusses in this short video: [Mountain Lion Safety Tips](#).

Encountering and/or seeing local wildlife in its natural setting is one of the great joys of experiencing our local outdoors. In order to increase the likelihood that you will do so safely, take some time to learn about animal behaviour and how best to prepare for and deal with the inevitable encounters that you will have when you spend enough time out there. One place to start is in *Outdoor Safety & Survival*, Chapters 21-23 (pages 135-170) which include many



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*Reality Check* sidebars that are the sum of my lifetime of experience, mostly in North Central British Columbia.

## **Episode 51 (May 2019) General aviation passenger safety**

If you are an outdoor enthusiast living in British Columbia, sooner or later you will find yourself in a helicopter or float plane on the way to some backcountry location. Bush pilots should give detailed pre-flight passenger safety briefings; but if they do not, this is something that you should insist on for your own safety. Some things that you need to know:

1. How and when do you open the doors in the event of a crash landing on land and/or on water?
2. Where's the emergency locator transmitter (ELT) and how can it be activated manually if the pilot is incapacitated?
3. Are there other emergency beacons or communication devices on board?
4. How does the radio work?
5. Are dangerous goods such as bear spray stowed out of the cabin?
6. Has the pilot filed a flight plan, or is the flight being tracked by some other means, such as by his or her company, or flight following: [Automated Flight Following](#)?
7. How do you get out of a submerged and most likely inverted floatplane?

On a winter helicopter flight from Valemount to Robson Pass north of Mount Robson a few years ago, the pilot went so far as to stress that in the event of a crash he might be incapacitated with back injuries and asked that we make every effort to pull him out of the wreck in the event of fire. Self-evident, you might think, but this is something that was clearly on this pilot's mind, and I was impressed with his all-around thorough briefing. He had that essential survivor trait of thinking through 'what-if' scenarios, and he took the time to make sure that his passengers knew where the ELT was and how to help themselves (and him) in the event of a mishap.

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Bush flying is generally quite safe; I have taken hundreds of general aviation flights since moving to Prince George 41 years ago, all without incident. There is no doubt, however, that it's a different environment than standard commercial aviation, with much more onus on passengers to look out for their own wellbeing. For example, are you dressed appropriately for the terrain that you'll be flying over? Many years ago I commuted occasionally from Prince George to Houston by company helicopter, and some passengers had to be reminded from time to time that office clothes were not adequate for winter flying even on a route that generally followed the Highway 16 corridor. One thing that I try to avoid when doing any kind of flying is wearing synthetic clothing, since most of it is highly flammable and could make the difference in evacuating from a burning wreck.

Here's a short video about general aviation passenger safety briefings from the *Air Safety Institute*. It's mainly intended for pilots, but it's also good information for passengers to have in order to know what to expect and if necessary to ask for: [Passenger Safety Briefing](#).

For more safety videos from the *Air Safety Institute*, see: [Survival Safety](#).

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I recommend 'Underwater Escape' and 'Survive: Beyond the Forced Landing.' I have a whole chapter on downed aircraft in *Outdoor Safety & Survival*, pages 210-213.

## Episode 52 (May 2019) Bears and food storage

Improper storage of food, toiletries and other scented items while in bear country can carry hefty fines including impoundment of food and vehicles in some jurisdictions. More importantly are the threats to human and wildlife safety and loss of or damage to property that can result from improper storage.

According to the U.S. National Parks Service: *"Food" includes any item with a scent, regardless of packaging. This may include items that you do not consider food, such as canned goods, bottles, drinks, soaps, cosmetics, toiletries, trash, ice chests (even when empty, and even if certified as bear resistant), and unwashed items used for preparing or eating meals. All these items must be stored properly."*

In some jurisdictions, food may only be stored inside a vehicle (out of sight, with windows completely closed) only during daylight hours. If a food storage locker is provided at a campsite, food (including food wrappers, crumbs, baby wipes, canned food and drinks) must NOT be stored in a vehicle overnight.

In the backcountry, many jurisdictions are now mandating the use of bear canisters (see also episode 29, also on bear safety). Here's an informative primer on the use of bear canisters: [Get the most out of your bear canister](#). One thing that it emphasizes is the importance of leaving the canister on the ground, well away from your tent of course. Hanging it in a tree might appear to offer added protection, but that means attaching a rope which potentially gives an animal something to grab onto in order to take the canister away.

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With this episode, we have now completed a full year cycle safety blogs. For those who have followed along we have covered a lot of ground, and I thank you for your participation. If I can end this year with just one watchword that is applicable to almost everything we have covered, it is COMPLACENCY. DO leave home without it! (See also episode 8, Complacency).

## Episode 53 (June 2019) What is pepper spray and how does it work?

Pepper spray can be an effective deterrent on the trail, but have you ever thought about what gives this personal-defense-in-a-can its bite? Is it just weaponized hot sauce? This video from the American Chemical Society and PBS Digital Studios looks at what's in these little canisters, why it inflicts so much pain, and what to do when you accidentally spray yourself: [How Does Pepper Spray Work](#). And on capsaicin: [Why Do Hot Peppers Cause Pain](#).

Reference: AAAS News Release: [What is pepper spray?](#)

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## **Episode 54 (June 2019) Maximize your phone as a backcountry tool without reception**

Did you know that your phone can have utility even without reception? See also episode 5, and check out this interesting article from *Outdoor Research*:

[How To Maximize Your Phone As A Backcountry Tool—Without Reception.](#)

## **Episode 55 (September 2019) Satellite rescue beacons**

In the past year, our hiking club has had much discussion about emergency satellite beacons following the accidental activation of the club's *InReach* device on a hike in Eskers Park. There's an excellent article in the latest issue of *Adventure Journal* on the differences between satellite messengers such as the *InReach*, and PLBs such as I carry when hiking alone, and what happens when they are activated: [Satellite Messenger or PLB](#). An interesting take home message in this particular case is that if you have the choice, it might be better if someone can hike out and use a cell phone where you will be in direct personal and specific contact with local authorities than to utilize an international emergency system with inevitable delays, filtering down through several layers of people, and less specific information.

## **Episode 56 (September 2019) More on unexpected overnighters**

I recently did a five-day backpack of the Brazeau Loop in southern Jasper National Park. Only two kilometres into the hike, I was astonished to find the bridge over Nigel Creek had just washed out, especially as it had been fine a few weeks earlier when I had first attempted the hike. In its place was a massive tangle of newly uprooted trees and other debris, smelling like freshly cut wood in a sawmill. I learned later that a debris slide had occurred just a day before I arrived, originating higher up Nigel Creek. The interesting aspect of this story is that two day-hikers on the popular walk up to Nigel Pass apparently found themselves stranded by the event and had to spend an unplanned night out huddled under a tree until things had calmed down and they could cross. This was quite unexpected as they were very close to the Icefield Parkway and their vehicle, and the incident emphasizes the importance of day hikers, on group trips or otherwise, carrying enough gear and spare clothing to spend a night or two out if necessary.

## **Episode 57 (September 2019) Encountering three grizzly bears while solo**

In late August 2019, I solo-hiked the 83-kilometre Brazeau Loop in south Jasper National Park, which is truly one of the most spectacular hikes in the Canadian Rockies. It's twice as long as the Skyline Trail, and goes over five high mountain passes including rugged Nigel, scenic Poboktan and spectacular Jonas. Climbing alone in the high alpine meadows below Jonas Shoulder early in the morning of the fourth day, I suddenly found myself in the midst of a very active encounter with three grizzly bears comprising two nearly fully grown three-year old cubs and a roaring mama bear. You can see what happened here: [Grizzly Morning](#). Of interest, I was reading the last, unfinished book by famed Canadian First Nations author, Richard Wagamese the night before in my rain-soaked tent in the Jonas Cutoff campsite. Wagamese wrote about the importance of maintaining peripheral vision and awareness even while watching your feet when hiking over rough ground. I practiced that as I climbed the next



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morning, and it helped in the encounter that ensued — sometimes the universe just seems to speak to you. Have you thought through what you would do if you suddenly find yourself in a situation like this?

## **Episode 58 (September 2019) 40 hours alone**

From *The Sharp End* podcast, sponsored by the American Alpine Club, *40 Hours Alone* touches on many aspects of mountain hiking including going solo, letting someone know your itinerary, sticking to your itinerary, when to stay put, and emergency communication devices. In this revealing interview: *'Dr. Leslie Drapiza had carefully planned a winter hike of Oregon's Mt. Defiance on Superbowl Sunday, expecting the 12-mile round trip to go as smoothly as her previous training climbs. But when she got off-route during the descent, one bad thing led to another. By the time she was rescued, Leslie had spent two nights out in the cold and snow. In episode 44 of the Sharp End, Leslie tells her story: how she got stranded, how she survived, and how she dealt with incident in the weeks and months that followed.'* You can listen to this episode at: [40 Hours Alone](#).

## **Episode 59 (September 2019) Who lives, who dies and will the answer keep you alive?**

To bring this into focus for members of a hiking club, in 2008 *Backpacker Magazine* found that *'un-roped falls were the outdoors' number one killer, and the majority of victims were hikers, not climbers.'* This mirrors statistics from Europe where most fatalities in the Alps result from falls while hiking.

Have you ever wondered what distinguishes those who live and those who die in survivable outdoor mishaps? A researcher in the UK spent two years trying to discover what factors helped some people survive dangerous outdoor situations. Getting nowhere, he realized that he was asking the wrong question, and that he should have been looking at why some people were less likely to survive. *Backpacker Magazine* reviews what he learned in this excellent 32-minute podcast titled *'The Science of Survival,'* part of their recent *'Out Alive'* series. The episode is broken into three parts: *The brain and survival, who lives and who dies, and the drift or how small decisions can lead to big mistakes.* You can listen to the full episode (first up in the play list) at: [The Science of Survival](#).

## **Episode 60 (September 2019) More about bears**

Free workshops were recently offered in the city on co-existing with bears, and including grizzly bear safety, bear spray training, and the use of electric fencing to protect fruit trees and gardens from bears. Watch out for future similar workshops.

Here's a video from south of the border that's quite good: How to backpack in bear country and how to handle and prevent bear encounters. Did you know, for example, that carrying bear spray is illegal in at least one U.S. national park? [How to Backpack in Bear Country](#).

Check out my latest grizzly encounter on my recent Brazeau hike (episode 57). You can now watch the whole playlist or skip to day-4: [The Brazeau Loop](#).

# Safety Tips of the Week - May 2018 to May 2020

## Episode 61 (September 2019) GPS, map & compass and 'Guthook'

Do you use GPS for navigation in the backcountry, or do you prefer old school map and compass? It shouldn't be one or the other. Anyone who uses a GPS should have underlying map and compass skills and carry a good quality magnetic compass that is independent of any electronic device. Ideally you will also have a backup paper map, but a compass alone has value. As well as the safety aspect and confidence-building effect of carrying your own map and compass, it can add considerable interest to the hike and help give you a much better picture of your surroundings. Research has shown that paper maps help build a cognitive picture of one's surrounds in a way that GPS does not.

There is no doubt, however, that there has been a big push towards electronic navigation for hiking, with options including standalone GPS devices, GPS-equipped satellite communication devices such as InReach, and the ubiquitous mobile phone, all backed up by a plethora of apps and online resources such as 'Guthook.' In this *Outside Magazine* article about the smartphone app that is revolutionizing long distance hiking, the implications and possibilities are fascinating. They range from horror stories about people losing their phones or dropping them in creeks and having no idea what to do or where to go next without a backup paper map, to the inspirational story of long-distance hiking suddenly becoming accessible to a legally blind person: [How the Guthook App Revolutionized Thru-Hiking](#).

If you would like to get a taste of some current GPS tech, take a look at this fast-paced video from well-known eastern U.S. hiker, Sintax77: [How to use a GPS for Hiking](#).

## Episode 62 (October 2019) New avalanche safety notice by BC Parks

A prominent new sign has just been installed by BC Parks at the Sugarbowl trailhead (and possibly other similar mountain park trailheads) which clearly spells out the standard of practice for recreational travel in the winter mountain backcountry. Beacons, probes, shovels and training are recommended for all members of a ski or snowshoe party, not just the leader:



# Safety Tips of the Week - May 2018 to May 2020

## **Episode 63 (October 2019) What type of battery should you use in your avalanche transceiver?**

Answer: [How Rechargeable Lithium-Ion Batteries Negatively Impact Transceivers](#)

## **Episode 64 (October 2019) Staying together**

A recent story from Vancouver's North Shore Mountains emphasizes the importance of hikers staying together to avoid leaving somebody behind. Although the responding rescuers in this instance were critical of the hikers involved, it isn't that hard to lose track of somebody in a large group, as we found out this August on the weeklong trip when we inadvertently and unknowingly lost someone for more than an hour during a fierce electrical storm. There are several ways to mitigate this risk, including everyone in the group taking responsibility for everyone else, but the best way is for the group to stay together. You can read the story at: [North Shore Rescue calls out group for leaving hiker alone.](#)

## **Episode 65 (November 2019) Six recent snowshoer deaths in BC avalanches**

According to an Avalanche Canada forecaster, *"It's easy enough to go buy snowshoes and start walking around the mountains, people may not even be aware they are at risk."* North Shore News reports that this was likely the case when five snowshoers died on Mount Harvey near Lions Bay in 2017 after the cornice they were standing on collapsed; and again earlier this year when an avalanche swept across a hiking trail near Mount Seymour, pushing a 39-year-old snowshoer over a cliff to his death: [Avalanche awareness workshop.](#)

The article highlights the avalanche workshop jointly presented in North Vancouver on November 9 by *Avalanche Canada*, the *Alpine club of Canada* and the *Federation of Mountain Clubs of BC*. The FMCBC's role in this came about in part because of the recent Op Ed on avalanche safety and snowshoeing, [Spring/Summer 2018 Cloudburst](#) (pages 13-14), as well as from discussions around recent snowshoe/avalanche initiatives undertaken by the Caledonia Ramblers and other FMCBC clubs.

Postscript: The Vancouver Sun later ran a story on the avalanche workshop, [Growing number of snowshoers targeted at avalanche awareness event.](#) Worth noting is the considerable danger to rescuers, as well as that which is voluntarily accepted by snowshoers.

## **Episode 66 (November 2019) Don't put your bear spray away for the season just yet**

Two club members reported seeing fresh bear tracks in the past week. One person came across a new bear track near the Troll Lake cabin on Tabor Mountain, and another actually encountered the bear. It was undetermined whether the tracks were those of a very large black bear or a grizzly. A few days later, the tracks of a large grizzly were seen on the upper part of the Pilot Mountain road, quite close to where I twice met a young grizzly in the fall season several years ago; perhaps it was the same bear, now fully grown, returning to its old territory.

# Safety Tips of the Week - May 2018 to May 2020

It's a good idea, therefore, to remain bear aware for the next few weeks until winter really digs in remembering that bears are not true hibernators and can occasionally be active at any time of the year. It's also worth considering that a bear that is still active in mid-November might not have put on enough fat to see it through the winter and could possibly pose more of a predatory threat than usual, in which case be prepared to fight for your life. Bear spray is likely to be less effective in below zero conditions, so consider keeping it inside your clothes for warmth, as long as you can still reach it quickly if needed.

## **Episode 67 (December 2019) Human decision making**

An excellent safety video was released by the Air Safety Institute just before the holiday season. Aimed at general aviation, and addressing pressures experienced by private pilots during the busy holiday period, it has many aspects of human decision-making in tight situations that are relevant to recreation in the backcountry. '*Get-home-itis*,' as search and rescue specialists sometimes call it, can be just as tempting in the outdoors as it is in the skies, with comparably risky consequences.

The video includes two book references, one of which is *Thinking, Fast and Slow* by Daniel Kahneman. Kahneman won the Nobel Prize in Economic Sciences for his work in psychology and human decision-making, and is considered to be one of our most important thinkers in many fields, including economics, politics and medicine. According to Kahneman, "*Many people are overconfident and prone to place too much faith in their intuition.*" An alternative way of thinking about this overconfidence is the complacency to which we are all susceptible in the outdoors.

The other book, *Think Again*, notes that "*...important decisions made by intelligent, responsible people with the best information and intentions are sometimes hopelessly flawed.*" Again, we have all seen this at one time or another, in ourselves and others, in the backcountry.

Some highlights for me in the video were:

- Intuition is hard to override. Slow down, engage in deeper analysis and avoid impromptu actions.
- Be aware that being tired and hungry makes it harder to think things through properly.
- Positive mental preparation helps you in prime decision-making.
- Initial decision-making is crucially difficult to retract, but we must be prepared to re-evaluate. We tend to overweight reassuring evidence for the initial decisions and underweight conflicting evidence. Be ready to reconsider your entire decision-making whenever new facts appear.
- We are heavily influenced by prior similar experiences - ask yourself how similar this really is.

Making Good Decisions (26 minutes): [Holiday Flying: Good Decisions Make Happy Memories.](#)



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## Episode 68 (January 2020) Avalanche news

Avalanche Canada has begun providing a regular avalanche forecast for backcountry users in the North Rockies. Their new three-person North Rockies field team is modeled after their successful South Rockies field team. They will collect snowpack information for forecasts to be published every Monday, Wednesday, and Friday this winter. Let's make the most of this improved forecast for our area before setting out on every trip into the mountains:

[Avalanche Forecast for the North Rockies.](#)

Avalanche Canada has created a presentation on the tragic incident on Mt. Harvey, where five snowshoers were killed in April 2017. There is much to learn from this incident, particularly for the growing user group of backcountry snowshoers.

## Episode 69 (January 2020) Safe transport of bear spray

Looking ahead to the summer season and possible fly-in trips to the backcountry. We all know that it is not safe to carry bear spray inside the cabin of an aircraft (or car). In the past, all of our backcountry fly-in trips have either been by helicopter, which typically has an outside storage compartment, or by floatplane with storage space inside the floats. But what about a fixed wing aircraft without floats and the accompanying external storage, such as an aircraft equipped with tundra wheels for bush landings on rough or improvised strips? The image below shows how it can be done.



How to safely transport bear spray in a fixed-wing aircraft on wheels without an external storage compartment.

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## Episode 70 (January 2020) Hiking boots for winter and summer

We have heard a lot in recent years about ultra-lightweight hiking and backpacking, especially on the long-distance trails south of the border. Locally, we've seen a trend with more people showing up for mountain hikes in lightweight, low-cut footwear. Some of us, who have long advocated good boots and ankle protection in the backcountry, have begun to question whether that still holds true. With that in mind, here's a reality check from a Scottish YouTuber as he reviews the type footwear that he uses year round in the Scottish hills and mountains, countryside that is not unlike our own hiking territory: [What Hiking Boots?](#). The video references the boot grading system ([Hiking Boot Grading System](#)) that is apparently in use in the UK; but you can ignore that part and just get a sense of the types of footwear that he advocates. For a North American overview of choosing hiking boots, check out REI at: [How to Choose Hiking Boots](#).

## Episode 71 (January 2020) Dangers of carbon monoxide poisoning in winter camping

*The Sharp End* podcast, created and hosted by Ashley Saupe and presented under the auspices of The American Alpine Club focusses on accidents in mountaineering, but includes episodes of broad general interest to outdoor enthusiasts, especially in the borderline areas between hiking, skiing, snowshoeing and mountaineering. A recent episode is relevant to winter camping: [Deadly Gas - Close Calls with Carbon Monoxide](#). The episode features Ashley's own experience with CO poisoning in Alaska a few years ago, as well as a close call experienced by climbers in 2018 on Denali. In each of these cases, multiple fatalities were narrowly averted because one individual felt that something wasn't right and acted on it.

In the Denali incident, that individual was a jet fighter pilot, and his training kicked in when he began to feel 'off.' (Incidentally, this also illustrates the importance of training, practice and 'muscle memory' in safety critical situations). The episode suggests that CO poisoning is more prevalent than many of us think, and it further suggests that mountaineers who inevitably spend days storm bound in hard-to-ventilate snowy tents have all likely experienced low level CO poisoning at one time or another. It is especially dangerous because of its insidious onset, and the long recovery time for affected red blood cells. The advice in the closing few minutes of the episode is especially relevant if cooking in a confined space; for example to cook as quickly as possible (avoid the anti-boredom temptation to cook slowly in order to fill the time) and to aim for a clean, hot, blue flame. Carbon monoxide is sometimes confused with carbon dioxide, both being the products of combustion, and there can be confounding factors between them. CO<sub>2</sub> is the product of complete combustion, whereas the more dangerous CO is the product of incomplete combustion.

I included an example in *Outdoor Safety & Survival* (page 182) about two young but experienced backcountry skiers in Alberta in 2007 who tragically died in a snow shelter.

This *Sharp End* episode brings the dangers of CO poisoning into focus through Saupe's personal experience, as well as her interview with a first responder in the Denali incident. See

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also episode 81, as well as the review by Simon Leigh-Smith in *Wilderness and Environmental Medicine*, 2004: [Carbon Monoxide Poisoning In Tents - A Review](#).

## **Episode 72 (January 2020) How to use a compass and map**

From REI, one of the best short videos on using a compass that I have seen: [How to Use a Compass](#)

A compass and map seminar is well worthwhile attending, ideally at least a two-hour classroom session, followed by an evening or two outside. One evening would be spent practicing everything covered by this video, probably at local vantage point such as McMillan Regional Park; and the other would be to practice walking bearings and paces, which is useful for navigation in dense bush or above treeline in a whiteout. Pre-requisites would be to have your own orienteering style compass similar to one of those demonstrated in the video, and to have reviewed and practiced the contents of the video.

If you don't yet have a baseplate (orienteering) style compass, you might like to check this out: [Comparing and Rating Compass Features](#). For most purposes, a low-end but good quality baseplate style compass from a well-known brand name like Silva, Suunto, or Brunton is quite adequate and might even offer some advantages over more expensive models. I own both a basic Silva, which I always carry with me and which is good enough for most practical purposes, plus I have a top of the line Silva Ranger with sighting mirror and adjustable declination which I reserve for longer backpacking trips and/or where I might need more accurate and/or more frequent map navigation. It doesn't hurt to own more than one compass, so I'd recommend starting basic and considering a higher end model later. Avoid the small survival tool 'button' compasses; they are likely to be better than nothing, but are apt to be unreliable and confusing.

## **Episode 73 (February 2020) Make a checklist for everyday trips**

How many times have you left an essential piece of kit behind on a day hike? When that happens to me, I am usually able to improvise around it. For example, I once solo skied to the top of West Driscoll Ridge using willow branches for ski poles. While the consequences of an omission are usually minor, it can become a more serious problem if something else goes wrong. Murphy's Law suggests that the one time you leave your compass or other key item behind, or fail to leave an itinerary with someone, could well turn out to be that rare occasion when you actually need it. I was reminded of this last August at the start of my Brazeau Loop backpack where the bridge over Nigel Creek had been washed out by a large debris slide just the day before. I learned later that two day hikers returning from the relatively easy walk up to Nigel Pass had to spend an unplanned night out huddled under a tree, even though they were a short distance from the highway.

The solution is simple, make a checklist and keep it handy in the top of your pack where you can review it before every trip. As a starting point, here are some ideas from REI: [Day Hiking Checklist](#). You can download a more comprehensive checklist that you can tailor for your own purposes from: [Backpacking Checklist](#).

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## **Episode 74 (February 2020) How to automatically receive daily avalanche forecasts**

It is quick and easy to subscribe to free daily avalanche forecasts. Even if you're not going snowshoeing or backcountry skiing right away, having day-to-day forecasts at your finger tip will give you a clearer idea of how snowpack conditions are evolving through the season. You can choose to receive the forecasts direct to your email, or to your web browser, or both. The two forecast areas closest to Prince George are 'Cariboo' to the southeast, and the new 'North Rockies' forecast to the northeast. I recommend subscribing to both forecasts as many of our most accessible mountain areas are along the Highway 16 corridor which is the boundary between these two areas.

To set up each avalanche forecast first go to [Avalanche Canada](#). Click in the forecast area for which you would like to receive regular avalanche bulletins (enlarge the map if necessary). This will bring up a forecast window on the right of the screen with the forecast area name at the top. Click on that forecast name to get the full forecast screen. Go to the window on the right of the full screen forecast and click on the 'RSS Feed' icon near the bottom of the list. This will take you to the RSS feed for the forecast area that you have selected. Copy the URL from the web address line at the top of the screen, and paste it into the appropriate field of the 'RSS aggregator' in your email program. What you do next will depend on your particular email program: search for 'RSS aggregator' or just 'RSS' in your email Help. For *MS Outlook*, for example, the Help instruction is to: right-click the RSS feed folder and choose 'Add a New RSS Feed.' In the New RSS Feed dialog box, enter the URL of the RSS feed that you copied from the CAA website above. For other email software you might have to enter your email address as well as the URL. Alternatively, if you would rather see the forecast in your web browser instead of your email, just click on the line 'Subscribe to this feed' near the top of the RSS feed forecast page. Finally, change the title of each RSS feed in your email index to distinguish one forecast area from the other. Repeat this procedure for the other forecast area, and add others if you wish. You can unsubscribe at any time just by deleting the item from the RSS feed folder.

## **Episode 75 (February 2020) Books, maps and online tools for trip planning**

Youtuber *Martyupnorth* has released a great video on books, maps and online tools for trip planning: [Backpacking trip planning tools](#).

## **Episode 76 (February 2020) Be prepared and plan ahead**

Sage advice from the Northwest Territories police about safety in the outdoors with lengthening daylight hours and the seasonally growing desire of northerners to get outdoors. This is equally applicable to northern and north central British Columbia: [Be prepared and plan ahead](#).



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## **Episode 77 (March 2020) Aftermath of an avalanche tragedy**

A skier shares what happened the day he lost his wife to an avalanche. There are many lessons in this tragic story that relate to avalanche safety in particular, and outdoor safety in general, especially complacency to which anyone can be susceptible:

[The day he lost his wife to an avalanche.](#)

## **Episode 78 (March 2020) Why trekking poles are a great idea**

I first wrote about the pros and cons of trekking poles in episode 19. Last summer, I met a young couple while solo backpacking the 81-kilometre Brazeau Loop who were not using trekking poles, and who asked me about mine. One was interested in the possible benefits, while the other appeared to see them as some kind of crutch that they hoped they would never have to use. In my experience, the correct use of trekking poles allows one to mobilize arm and shoulder muscles, making uphill climbing much easier and developing upper body strength. More importantly, they can reduce stress on knee joints and the spine and significantly extend hiking years. A recent story in *Adventure Journal* reinforces these benefits:

[Praise for Trekking Poles.](#)

## **Episode 79 (March 2020) Pandemic preparation in perspective**

Our hiking club has taken some sensible precautions in the wake of the COVID-19 pandemic. To underscore these initiatives and to get a moderating perspective on things, check out Canadian Les ('Survivorman') Stroud's Advice. This is the best short video that I have seen to date on the current crisis: [Survivorman Pandemic Preparation.](#)

Try and keep an upbeat approach to life in the next few months, while practicing the recommended precautions of social distancing and hand washing; and get out and walk or hike, which is still and always one of the safest and healthiest things you can do!

## **Episode 80 (March 2020) Crisis management**

A leading European aviation YouTuber, *Mentour Pilot*, has released a timely video about crisis management. Drawing on the methodology used by airline pilots in a crisis, having an organized approach is similarly important in dealing with a backcountry emergency and, of course, the ongoing pandemic: [How to deal with crisis.](#)

First, do not panic; then, use a decision-making tool or tactic which has the following elements:

1. Define the problem – what's the key issue?
2. Gather information,
3. Consider options,
4. Select an option,
5. Execute that option, resist hesitancy,
6. Evaluate the situation, which may be changing, and
7. Repeat the above steps as necessary until the situation is resolved.

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## Episode 81 (March 2020) More on carbon monoxide poisoning

Episode 71 discusses the dangers of carbon monoxide poisoning while winter camping. Recently, the following interview was conducted with a general aviation pilot who was overcome by CO in his aircraft, a single-engine *Mooney*, as a result of a crack in his plane's exhaust. A similar situation could occur with a vehicle on the highway, but is obviously even more critical in the air. This took place over an extended period of time while airborne and over multiple flight legs, and is one of the most gripping airplane stories you'll ever hear. More broadly, there are key takeaway lessons about the insidious and potentially long-lasting nature of CO poisoning that apply to home, car and cooking or heating in a backcountry tent. You can watch this compelling interview at: [Pilot unconscious from CO Poisoning as plane crashes](#).

As discussed in episode 71, recovery is not just a matter of getting fresh air, as CO poisoning has a long recovery time and may have lasting effects. The victim was lucky in this instance, to be taken to the Mayo Clinic where he was correctly diagnosed and treated for many hours in a hypobaric chamber. It is noteworthy that this had the serendipitous effect of helping to save his frostbitten hands. Do you have up to date CO detectors in your home?

## Episode 82 (April 2020) Avalanche terrain information survey

Avalanche Canada has suspended avalanche forecasts for the season due to the coronavirus and resulting lack of field data with which to prepare reliable forecasts; but it's not too early to think ahead to future seasons. If you've been using the daily avalanche forecasts, you can test your understanding and provide feedback to inform future design changes, while having fun doing it and being in line for cash awards. To that end, the Avalanche Research Program at Simon Fraser University, together with Avalanche Canada and several U.S. Avalanche Centers conducted an online survey to examine how backcountry recreationists, including skiers and snowshoers, use public avalanche safety information: *"We are interested to hear from backcountry users of all experience levels. Our goal is to better understand how you process hazard and terrain information provided in public avalanche forecasts. The results of this study will offer important insight for improving avalanche safety information products in Canada and the United States."* [Avalanche Terrain Information Study](#).

## Episode 83 (April 2020) Mystery on the mountain

Here's a hiking safety story with a very unusual twist. Can you guess what's coming? How would you react if you encountered a similar situation? Would you be prepared, with the essential spare clothing, food and knowhow? Enjoy this uplifting *Mystery on the Mountain* story from Backpacker Magazine's 'Out Alive' podcast: [Mystery on the Mountain](#).

## Episode 84 (April 2020) Breaking the chain

Aviation is the gold standard for safety, and below is a link to a video interview about '*breaking the chain*' in general aviation accidents, some principles of which are applicable to outdoor recreation. If '*breaking the chain*' sounds familiar, it's a similar idea to '*flattening the curve*' in pandemics.

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According to Wikipedia, '*general aviation*' refers to all civil aviation aircraft operations other than commercial air transport or aerial work operations. The accident and fatality rate in general aviation has long been much higher than in commercial aviation, and consequently there are several initiatives underway to take hard won lessons from commercial aviation and apply them to general aviation. Some of these principles also apply to the backcountry:

1. Accidents do not usually result from a single event, rather they are typically the upshot of a series of decisions or things that happen.
2. Use a checklist (as hiking trip leaders do) and never be too sure that you have everything covered. Always ask yourself: "*do I have a way out?*"
3. Risk mitigate yourself, and when you accept a risk, ask again: "*do I have a way out?*"
4. Think about what you're doing, try to stay ahead of things and identify risks that are out there.
5. Never accept that you know it all: typically the more you learn, the more you realize that you don't know it all.
6. Try teaching or passing on what you know to others; it's a great way to refresh or grow your own skills!

From the YouTube channel '*Taking Off*' here's the latest '*In the Hanger*' interview on breaking the chain: [Breaking the Chain](#).

## **Episode 85 (April 2020) It's time to brush up on bear safety**

I have addressed many aspects of bear safety in two years of writing this blog. Now, as the bears have emerged from their winter dens, here is some sound backwoods advice from respected Alaskan YouTube channel, *Far North Bushcraft & Survival*. Host, Lonnie makes no claim to be a bear expert, but he does have a lifetime of practical experience to draw on; plus he has some great personal video footage to backdrop his narrative. I especially enjoyed his scene of bears feeding on cow parsnip. This is a favourite grizzly bear food and a good reason not to camp in an idyllic-looking cow parsnip patch rife with fresh grizzly sign, as we were once tempted to do at the end of a long, hot day of backpacking in the Tchaikazan Valley. I don't personally endorse the need for hikers to carry firearms for bear safety, for reasons of weight, efficacy, skill, practice and necessity, but it might be more relevant for those living in the Alaskan bush. Lonnie's bear safety videos are a few years old, but are worthwhile watching: [Wilderness Bear Safety Part 1](#) and [Wilderness Bear Safety Part 2](#).

## **Episode 86 (May 2020) Close encounters of the human kind**

Despite the suggestive title, this week's content is not about '*social distancing*' as we've come to understand it during the current pandemic. Rather, it addresses an aspect of outdoor safety that we don't often like to think or talk about, namely the possibility of encountering threatening or aggressive behaviour by other humans in the outdoors. To keep things in perspective, the risk of human conflict is much lower in the backcountry than in our safest cities, and it's definitely not a reason to stay home or to avoid hiking or backpacking, or even to avoid going solo. But bad things do occasionally happen in the outdoors and on sparsely travelled

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highways as we have seen in northern BC over the years. Examples include a European couple hitch-hiking in the Pine Pass area who were shot to death in their tent at night by a man who had earlier given them a ride; a family who were murdered while car-camping in Wells Gray Park; a bizarre crossbow attack on someone who had stopped to help on the side of a highway near Prince George; the many murders and disappearances along the *'Highway of Tears,'* and the senseless killings along the Stewart-Cassiar and Alaska highways in 2019. ([2019 Northern British Columbia murders](#)).

If you look back over your own outdoor history, and especially if you've been hiking and camping and driving to remote trailheads for many years, you may recall a situation or two where you felt uneasy about someone you had encountered there. In my 50 years of hiking and backpacking, I can recall three or four times when I felt distinctly uncomfortable with someone I had met on the trail or at a campsite. If you should find yourself in a circumstance like that, I suggest doing whatever you can to remove yourself from the situation and strive to keep your range of options open. Most likely it's nothing to be concerned about, but as with anything else related to outdoor safety, DON'T be complacent, and DO listen to your 'gut.' Millions of years of evolution have primed us to heed danger cues that our conscious brain might not be aware of. Take sensible precautions when entering a remote area. For example, I recall car-camping alone late one evening at the old forest recreation site at Ptarmigan Creek in order to stage an early morning solo hike up Erg Mountain. I instinctively waited until there was no traffic in sight before turning off the highway in the twilight to drive the six-kilometre forest access road to the creek crossing.

In August 2019, at the end of the club's weeklong trip to South Tweedsmuir, Judy and I found ourselves tenting alone at an informal fishing access campsite on the Dean River. It was the same site that most of our group had staged our trip from a week earlier. There was one other unrelated party there, having some sort of celebratory picnic dinner, but they left at around 9:30 p.m. leaving us as the sole occupants of the site. Shortly after we crawled into our sleeping bags at around 10 p.m., a pickup truck pulled in and very slowly crept around the now dark campsite before leaving. It didn't feel right: we were spooked by not knowing what was going on, and by the possibility of a middle of the night return visit by the truck's occupants who now knew that we were there alone. So right after they left, we took control of the situation by collapsing the tent, throwing everything in the car, and within ten minutes we were on the road. We drove through the night for nearly three hours along the winding Highway 20 until growing tiredness made it unsafe to continue. Anxious to locate a secure place to stop, we eventually found a provincial park campsite with a few other occupants at around 1 a.m. just as it started to rain. It was a stressful evening, but was partly compensated by a beautiful full moon illuminating the surrounding hills during the first two hours of our drive through the night. We drifted off to sleep content with the decision we had made.

Sometimes, things happen that are truly beyond our control, as I found out in October 2018 while driving home after a pleasant solo hike at Purden Lake. It was a warm, sunny, fall day, with no other highway traffic in sight, when, without warning, the driver's side windshield of my car received a sledge hammer blow by what I later realised must have been a rifle bullet. It took a while for the shock to wear off, and several hours for me to figure out what must have happened and to appreciate my good fortune in that the bullet had glanced upward and off the



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original VW windshield of my two-year old car. Lesser quality replacement glass might have been a different story: if the bullet had penetrated the glass, which my later research suggested it should have, I probably wouldn't have known what hit me. The RCMP put it down to a stray hunter's bullet; but the impact point, coupled with ricochet marks on the top of the frame and the acute-angled spurt of gray dust that I had registered at the time of impact, suggested a trajectory from a rocky bluff several hundred metres directly ahead. Was the round aimed deliberately at the driver side windshield, and by extension at the driver behind? The trajectory aligned perfectly with the highway, NOT with that of a stray bullet incoming from a legal shooting distance off to the side of the road. The glass shop guy later told me that there had been similar incidents involving trucks in the Pine Pass area. See episode 24.

This brought to mind a disturbing incident that happened to one of our club members many years before on the same stretch of highway. It was early in the morning with little or no other highway traffic and the individual was alone, driving out to his cabin at Purden Ski Hill. A suspicious-looking van with some rough-looking guys inside closed on his car from behind, and then displayed a portable flashing red light to try and pull him over. Our protagonist, driving a well-powered Volvo, decided that the 'police light' was a fake and he succeeded in outrunning the van by flooring it. Quick thinking and a good decision on his part, I think.

Now, from Backpacker Magazine's *Out Alive* podcast season finale comes a gripping account of last year's attacks on the Appalachian Trail<sup>\*</sup>. It's a disturbing two-part episode that you can listen to at: [Tragedy on the Appalachian Trail](#) and [Tragedy on the Appalachian Trail Part 2](#). Hopefully this will not put you off hiking and backpacking as it does also have some positive messages of coming together, perseverance and recovery in the face of terror. Tragically, the man who was killed was a U.S. veteran who had taken up backpacking as his personal PTSD therapy, and he had gained a reputation for helping others on the trail including the other victim. The second casualty was a solo Canadian woman hiker from New Brunswick who was aiming to climb Mount Katahdin, the A.T.'s northern terminus. She was seriously wounded in the attack but had the essential survival instinct and presence of mind to play dead and to look for an opportunity to get away, and then to limp through the night to escape and raise the alarm.

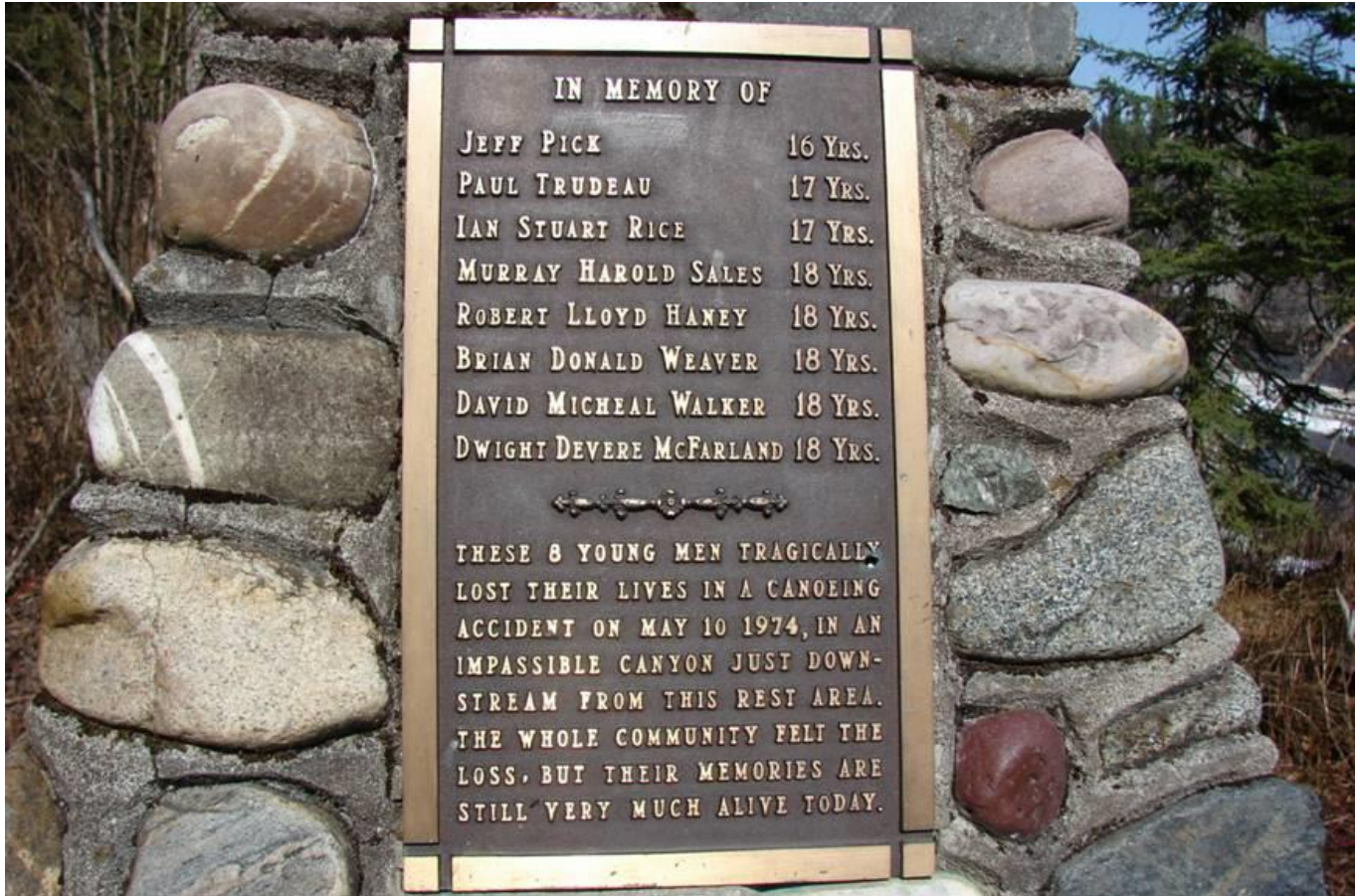
\* A.T. through-hiking has been disrupted again this year as hikers have been asked to leave the trail because of Covid-19. Because of its popularity and the close living quarters in the many shelters and campsites (not a trail to hike for solitude), the A.T. has long had a reputation for community transmission of diseases like Norovirus. Combine this with tick-borne Lyme disease that is becoming prevalent along parts of the trail, and now Coronavirus, and it's starting to lose some of its allure for me. Despite once having been a member of the A.T.C. in the 1970s when I lived in Ontario, I think it might be past time to remove it from my bucket list.

## **Episode 87 (May 2020) Willow Canyon in full flood**

Forty-six years ago this weekend, a party of eight local teenage boys set off in canoes down the Willow River from Highway 16 east of Prince George. According to *The Canoe and White Water* by C.E.S. Franks (University of Toronto Press, 1977) the party was inexperienced in

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river running. Franks goes on to say that they had not, and probably could not have scouted the river that was swollen from snowmelt, plus they lacked adequate supports. Innocent of what lay ahead, they rounded a bend and were swept into the impassible Willow Canyon just downstream from the highway. All died in what became one of Canada's worst canoeing accidents.



The tragedy galvanized the community and was the beginning of the *Prince George Search and Rescue (SAR) Group*, which continues to this day. I moved to Prince George just four years later, joined the SAR group later that year and consequently got to know many of the people who were involved in that fateful search. I heard hair-raising accounts of helicopters flying inside the canyon, and on one occasion clipping tree branches with the rotors. Several people learned to rope rappel 'under fire' on those dangerous cliffs; and I can attest from personal experience just five years later that the gear and training standards in the late 1970's were nothing like today's. Old ropes with questionable provenance, well-intentioned but amateur instruction, surplus police riot helmets that the Province had picked up on sale in the U.S. in lieu of climbing helmets, and more.

Despite its tragic history, the Willow Canyon is also one of the region's natural wonders, especially during the spring freshet which we are in the midst of now. It's surprising that it's not better known, since it's close to town and there is fairly good vehicle access to a safe viewing

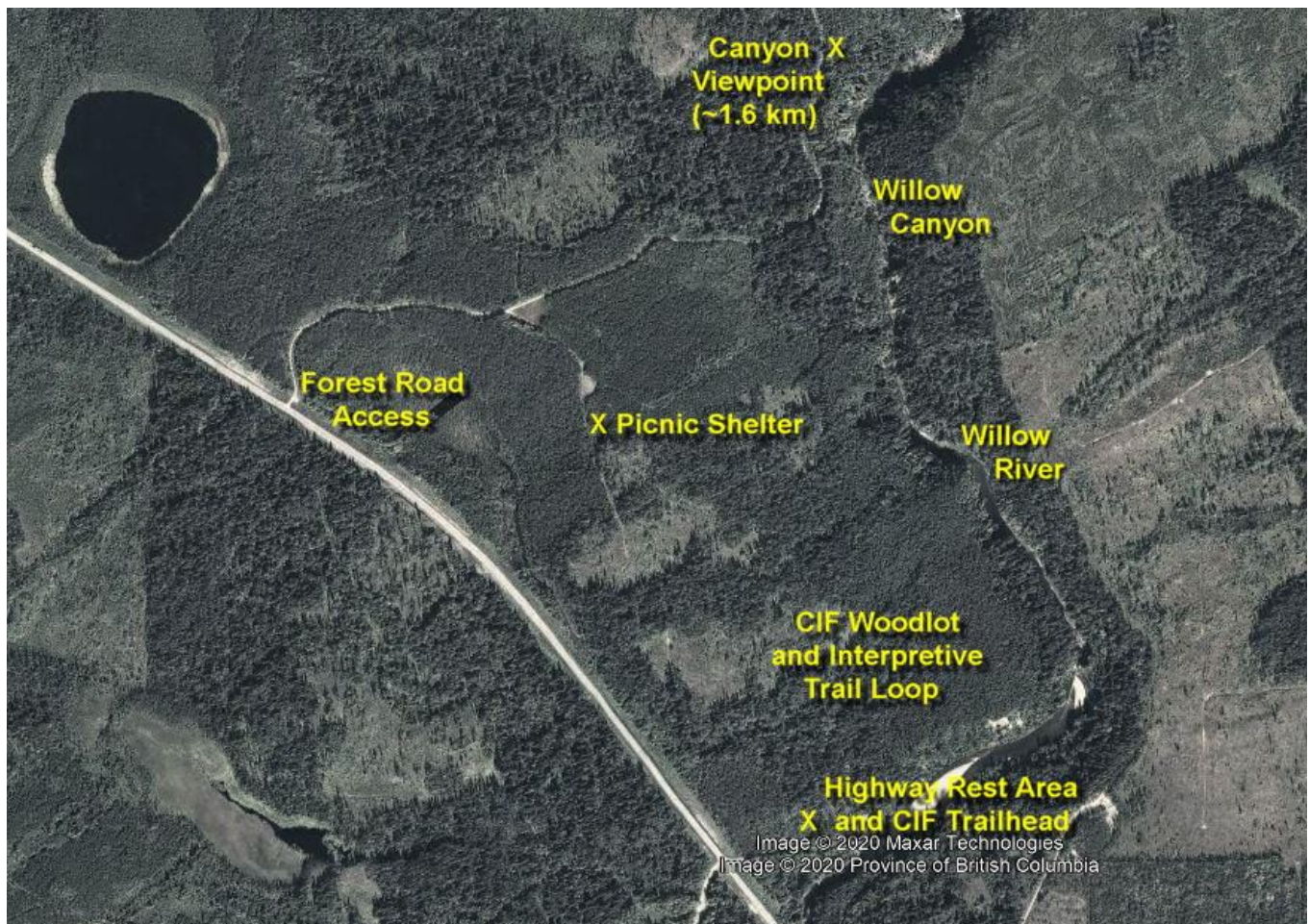


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area. To give you an idea of what the canyon looks like in full flood, the following images were taken in late April and early May: [Willow Canyon in full spring flood](#).

The protective viewpoint is accessed either by walking, driving, or some combination. One option is to park at the paved highway rest area and walk the CIF interpretive trail to the picnic shelter. From there, walk a short distance farther north, then turn right onto the forest road for another kilometre to the viewpoint. The CIF trail currently has some wet sections, downed trees, a ribboned-off section, and fresh bear sign. CIF volunteers maintain the trail and its interpretive features each summer prior to their regular school field trips and fall public tours in non-pandemic years. The interpretive signs are interesting and in great condition, so it's a worthwhile walk in its own right.

The other, shorter option is to walk or drive directly to the viewpoint on the narrow forest road. Turn north off Highway 16 just over a kilometre northwest of the Willow River Bridge. The dirt road may have a few muddy spots, but should easily be passable for a car by early May as evidenced in the video. If in doubt, drive as far as you are comfortable and then walk the rest of the way – it's not far. The signed viewpoint is on the right (east) side of the road just past the 1.5 km sign.



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Some parts of the video were filmed directly above the canyon (inaccessible except by bushwhacking) in order to better capture the full impact of the maelstrom below. This is not recommended as there are extreme, brushy, unprotected cliffs. From the comparative safety of the canyon viewpoint, there is an excellent, long view back into much of the canyon. Bring binoculars for a better look.

From the viewpoint, one could continue walking north on the winding forest road, with possible options to hike or bushwhack down to the river below the canyon. Note that the bush is jungle-like, and good bushwhacking and navigation skills along with some hiking companions are a good idea. There used to be a trail down to the river a kilometre or so north of the viewpoint, but I have no idea if it's still there; most likely it's overgrown. Watch out for black bears - they are plentiful downstream as I can attest from having had several close encounters below the canyon. The club has led hikes and snowshoe trips in this area in the past, including one in which a large black bear seemed determined to cross the river and join us for lunch despite our large group size. It was eventually deterred with an air horn after much shouting and waving had failed to impress it; so yes, air horns are effective and are probably a lot safer than bear bangers as noise deterrents.

On another occasion, late on a workday evening, a treed mama black bear with cubs quietly let me pass on my way down to the river, but got quite upset when I tried to return a few minutes later. It was dusk, and she came down out of her tree and faced me on the trail, huffing and blocking my way out, with her cubs still up in the tree right behind her. I had no recourse but to retreat, and racing nightfall I bushwhacked half a kilometre back up the river until I found a spot where I could scramble up to the road. Halfway upslope, I passed the rotten, half-eaten carcass of a salmon that another bear had stashed high above the river, so I was happy to make it back to the car in one piece that night.

Another cautionary note: You may have heard of, or seen people kayaking in the Willow River at the Highway 16 bridge, but please note that this is upstream (south) of the canyon and highway rest area. **The river downstream (north) is beyond unnavigable.** So, if you do any river canoeing this summer, be sure to scout any rapids or blind corners that you are not already familiar with. Local resources include the [Prince George Canoe & Kayak Club](#) and [Blackwater Paddling](#). To learn how to safely rock or ice climb in local canyons, resources include the [Alpine Club of Canada Prince George Section](#) and local climbing gyms.

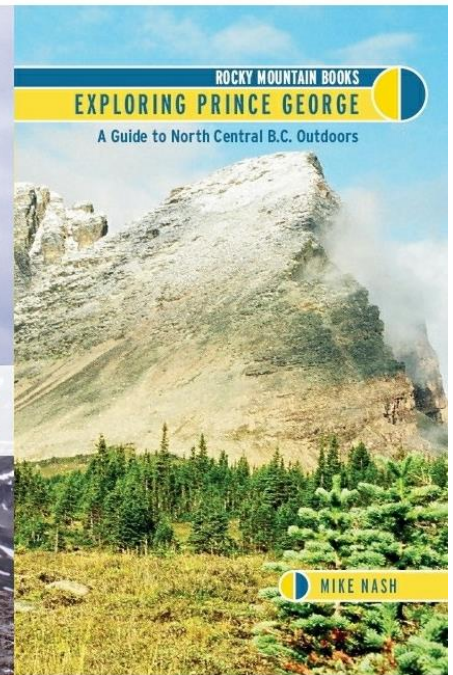
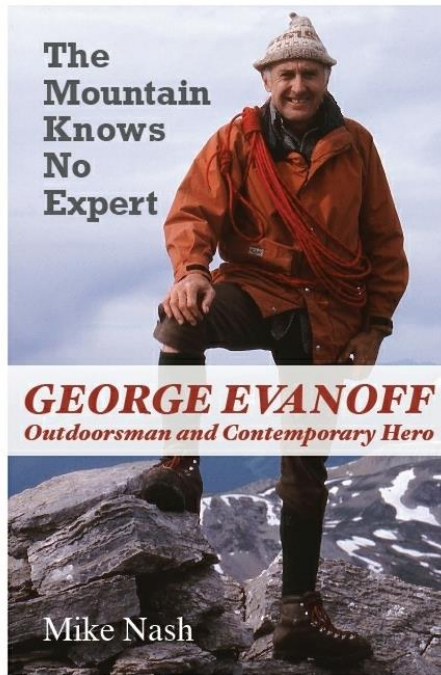
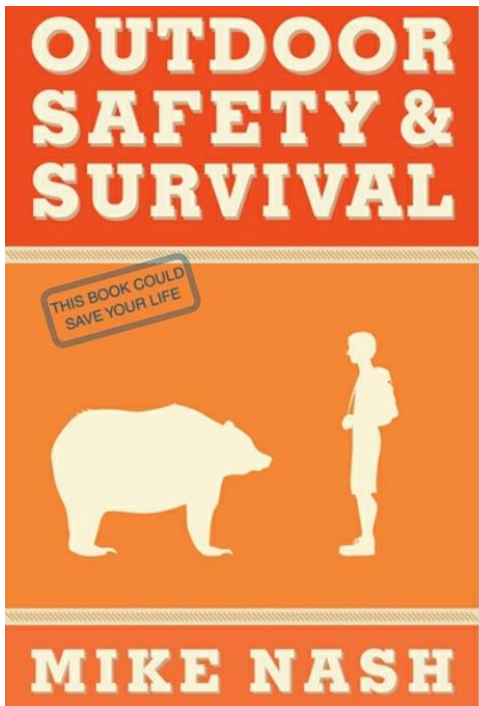
**Episode 88 (October 2021)** from MSR: [Snowshoeing beginners guide to avalanche safety](#)

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Thanks again for reading this safety tips blog, I hope it has given you some new ideas and different perspectives.



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## [Books: YouTube Playlist](#)

