

SKYNEWS



West Coast Trail: Bruce (left) and Andrew going through the hole in the wall at Tsusiat Point, June 28th, 2008; photograph by Veronika Irvine

Trails and Tribulations

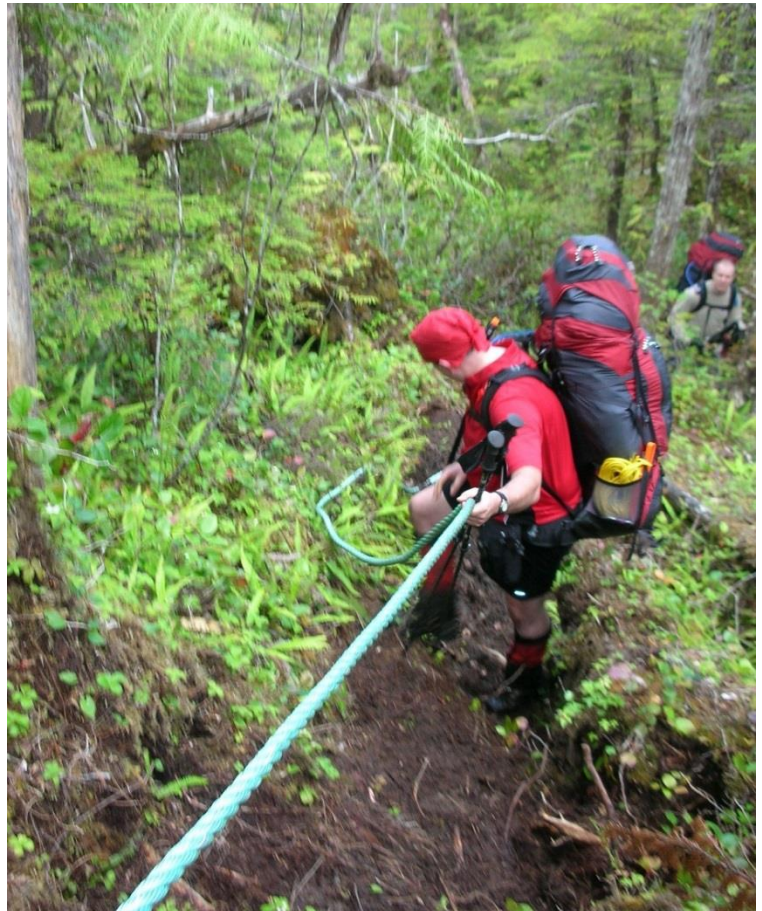
Vancouver Island is a hiker's paradise, with numerous world class trails located here: West Coast Trail, North Coast Trail, Nootka Trail, and the Juan de Fuca Trail. There's even a Vancouver Island Trail: a patch work of local trail systems being stitched together to potentially allow hikers to walk from one end of the Island to the other. Add to that an abundance of smaller trail systems across the South Island. There's the Timberman Trail Loop around Jocelyn Hill that's not far from the Victoria Centre Observatory and across the road from the Mount Work Trail. It also connects to a series of trails that lead to the trail system around Mount Finlayson. The Sooke Hills have numerous paths, many of them not as well marked as

those more traveled. You can go hiking in Strathcona Park and see one of the largest waterfalls this side of the Canadian Shield. For someone looking for something that's not at all technical or challenging, you can walk a portion of the Galloping Goose Trail or take a leisurely stroll around Matheson Lake. There are so many trails around our communities that I doubt I'll ever end up hiking them all, partly because I tend to return to my favourite ones. We truly live in one of the most beautiful places on the planet.

While I spent a childhood rambling through the woods and shorelines of the Gulf Islands, climbing more cliffs than my parents would want to know about, I came by hiking as a structured activity much later on. When a recruiter continually pressed me on why I wanted to join the infantry, I told him it was because my parents never took me camping as a child, which was true. Other than the unpleasanties caused by insects, something most amateur astronomers are more than a little familiar with, I've enjoyed the time I've spent in the bush. Transitioning from military hikes to civilian hikes is an exercise in self-reliance. You often hear news stories with someone suggesting that someone who is missing in the wilderness is probably all right because they have military training. With very few exceptions, military training will help you deal with crisis management, enduring hardships in the wilderness, and navigation; but it doesn't do a lot to prepare you for ensuring you have access to safe water or teach you to feed yourself. Almost all the issued equipment is also heavy and uncomfortable, with only a few rare pieces of kit being something a reasonable person would actually be willing choose to use.

It often takes eating some very bad camping food to figure out how to pack something you'd actually want to eat. Military rations are generally terrible and too heavy for more than an overnight hike, where you could have brought much better food to eat. During the day, for me it was a carefully measured out ration of meal bars, fruit bars, and even a bit of beef jerky. In camp, most hikers make use of dehydrated meals, especially for multiple day hikes. Most are bought at outdoors outfitter stores, but some people make their own. I've had some of the dehydrated desserts and they're a lot more work than they're worth. These time consuming desserts are fine for occupying idle hands in a camp you're staying at for the day, but less ideal when you're trying to get through your camp routine so you can have a little time to relax by the campfire before going to sleep. I also carried a small plastic vial of mixed spices and another of hot sauce, in the attempt to make my dehydrated meals taste a bit more like food. For the first dinner on a multi-day hike or dinner on an overnighter, I'll sometimes pack frozen sausages and store them in the middle of the pack, with an onion to cook as well. Despite the extra weight, I always make a practice of carrying at least one more meal and a few extra meal bars than I expect to need, because plans can change and you might get stuck somewhere longer than expected. I've never needed my pack's extra emergency food supply, but it's just a good habit to get into doing.

I met a couple at Michigan Creek, on the West Coast Trail, who were eating the gourmet equivalent of dehydrated food, compared to what everyone else was eating for dinner that night. They didn't go any further than that first day of hiking on the trail and decided to just stay there for the remainder of their hiking vacation. If you don't train hard for multiple day, hilly, coastal trails you're going to be spending all of your time trying to survive it, instead of enjoying yourself on your hike. I met a family of hikers who did the West Coast Trail



yearly, carrying a lot of fresh provisions, including a bag of onions hanging off their father's pack, but they were clearly all extremely fit. On the North Coast Trail, the group I was with had to put out a fire left by careless campers that were there before us. There's nothing quite as uncertain as a long descent down a hillside, when you can smell the wood smoke from a fire below you. We caught up with the group responsible for the fire on the bus ride back to Port Hardy. They were eating pancakes in the mornings, but not weren't so smart about properly putting out their campfires. I carry a collapsible Gortex bucket, for doing dishes in and to put out fires. A good rule of thumb for extinguishing campfires is that if you think it's out, put another bucket or two of water on it and be sure. The nice thing about our coastal trails is that when you're camping on the beach you have easy access to a lot of salt water nearby.

Water is what you carry, plus what you can purify. I carry a filter pump that can attach to either my Nalgene bottle or Hydrapak reservoir for easy refilling. I also have a collapsible camp jug that holds eight liters, so our group didn't have to waste daylight to refill the next day's water bottles and reservoirs before setting out the next morning. On the creeks and rivers of the coastal trails, when you're camping on the beach there's a certain amount of mixing between the salt and fresh water. You really need to go upstream a ways to ensure you don't get any salt water. There's always someone getting lazy and filling up their water bottles too close to the ocean. You can try to tell them it's a bad idea, but they'll probably do it anyways, and the next day they'll be a bit messed up from drinking salt water. I met one German hiker, coming from the other direction on the West Coast Trail, carrying the equivalent of an oversized, hard plastic water reservoir, bigger than a jerrycan, which filled his huge rucksack. The rest of his camping supplies were haphazardly attached to the outside of his pack and the awkward mass was clearly killing him. People had told him that this wasn't going to work, but he was afraid to drink any water that didn't come from a tap. He was a solo hiker only a couple kilometers into a seventy-five kilometer hike and you just knew he wasn't going to make it. You'd think that the park rangers would set aside some of their mandatory trail orientation sessions on the West Coast Trail for kit checks, to save sending out the rescue parties later, but they don't. Most hiking trails don't even have orientations of any sort, beyond posted notices that inform you of the fact that bears and cougars really do exist.



We can spend a great deal of time, effort, and expense equipping ourselves to adapt, with varying levels of success, to living in the wilderness for a time. It's easy to get obsessed with camping and hiking gear, as much as any amateur astronomer can get obsessed with their equipment. Sometimes we can forget that they're tools to give us the ability to engage with our hobby and not the actual hobby itself. For some people, by the time you've finally gotten all the high speed kit you want for whatever hobby you're involved in, you're near the end of the cycle of participation for that hobby. For others, it's a lifetime investment for a lifetime's involvement in a hobby. Most people start out hiking by carrying much more than they need. After that they either gradually scale back or don't carry nearly enough equipment and slowly begin to dial into the right carry load. The famous outdoorsman, Mors Kochanski said: *The more you know, the less you have to carry. The less you know, the more you have to carry.* I've generally been one to carry a heavy pack. In part, this is because I'm used to being a beast of burden and carrying a larger portion of shared camping gear, and in part because I have a limit to my comfort level of what emergency kit and camping gear I'm willing to do without.

I do know a bit of what people refer to as *bushcraft*, but I practice very little of it when I'm hiking. I'm generally in parks, where I'm not free to cut down trees and make shelters out of them. I could sleep under a light tarp and open myself up to the bugs, but I prefer sleeping in a tent. You're unlikely to ever see me use a bow drill or a ferro rod, especially after being in the harness of a backpack all day on a hilly trail. I'll use a jet lighter or windproof matches before I resort to using a ferro rod. The wind on the beach in the evening can sometimes make it harder to start a fire, so I appreciate that the flame of the jet lighter won't blow out like a regular lighter's flame will. I bring a small piece of foam, to sit on the logs, when I'm camping on the coastal trails. It's not too bad to sit on the logs for one night, but after a couple of nights you really appreciate having a piece of foam to sit on the hard logs. While I don't do a lot of glamping, I do embrace the idea of doing small things to make camping a bit more enjoyable. It's easy to be uncomfortable in the bush.

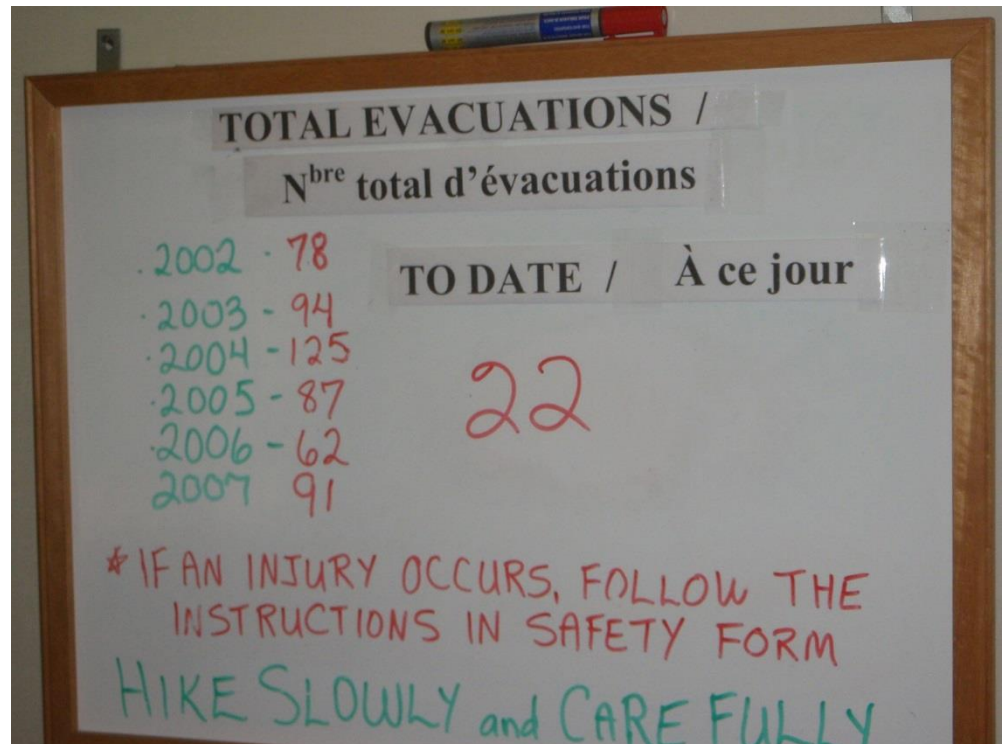
Animal encounters can be a bigger part of your hike than you planned on. It's more likely to occur when you're hiking alone, when some predators might be bolder or more curious. Hiking in a group is always safer, but it's less of a concern on the busier trails than on the more remote ones. How you approach solo hiking is a matter of confidence, experience,



and your comfort level. If you make more noise to alert animals ahead on the trail, you're less inviting to a solitary predator. Of course, you need to maintain a balance of telling the animal that you're not food, while also not becoming a threat. When the brush closes in more and the sight lines are reduced, I use my trekking poles to tap on rocks and trees louder and more often. I almost walked into the back of a black bear on the Juan de Fuca Trail by being too quiet and had to halt, to let it go on ahead to create some space, before I made any noise to alert it. On a long day's hike on the West Coast Trail, between Tsusiat Falls and Walbran Creek, my group spent a few hours leapfrogging a solo hiker and we asked him if he wanted to fall in with us since we were going to keep running into each other anyways, every time one group stopped for a rest and I added that it was safer in case he ran into a bear. He wanted to hike alone and wasn't worried about bears. Ten minutes after we left him resting on a beach rock, he was cornered by an aggressive black bear. He managed to keep it at bay with his walking stick until some other hikers came by and helped scare it off. The next day, he found the biggest group on the trail that day and hiked with over a dozen people for the rest of way. Regardless of whether you hike solo or not, you should always leave a trip plan and contact information with someone so they know something went wrong if you don't check in by a certain time.

First aid isn't something to be taken lightly on a hike. Even on a day hike, I always pack a first aid kit and I'm more likely to be using it on someone else than myself. When you're hiking with others, it's important that they show you where their first aid kit is and if they have any special medication you should know about (like beta-blocker pills or EpiPens). I make sure to have things like butterfly bandages, gauze, tape, tweezers, a small bottle of saline, and a field dressing. Taking a small tube of tooth numbing gel can be a life saver, if you get a bad tooth ache days away from civilization, something that can quickly take the joy out of being in the outdoors. Given how hard it is for band aids to stay on in the outdoors I've taken

to using liquid bandage that you brush on, which is even more useful for bad scrapes. The first time I did the West Coast Trail I got a bit cocky, rock hopping on the beach, and fell forward on the rocks. It wouldn't have been quite so bad if I didn't also have a fifty pound expedition pack on my back to help give an assist to gravity. It's important that if your pack is higher than your head to try to always fall on your back to avoid injury. The liquid band aid got a pretty good work out after that fall. Given that you brush it on, for obvious reasons it's important that everyone has their own bottle, and carry some regular bandages for others to use. I also carry moist burn bandages, which was a good thing when someone burned themselves badly using a stove. I carry a tensor bandage for sprains and even a spandex knee brace that I ended up lending to a hiking companion, who was already using theirs on one of their knees and needed a second one to finish the trail. The best way to make up a first aid kit is to buy one from a recognized first aid supplier and then customize it for your use. Unless you're a Level 3 first aid attendant and working as an outdoor guide, you probably don't need a kit bigger than a good sized paperback novel. It's important that your first aid kit only scales up to the level of your training. I have my CPR mask, but I'm definitely going to ask everyone around me if they have more recent first aid training than me. I'm not quite at the point of assessing a patient's four humors to determine their treatment, like ancient practitioners once did, but it's been a while.



Hiking is partly about escapism from the modern world, although a lot of people seem to take their electronic devices with them to live stream or document the experience for social media. Is it possible to climb up to a scenic summit anymore without taking a selfie? There's certainly the desire to go *touch grass*, beyond that patch of vegetation outside on the sidewalk boulevard. Whatever else you experience, a few days of camping in the bush will certainly increase your appreciation for the miracles of refrigeration and indoor plumbing. A few days unplugged from the Internet and social media is something many of us could use more of in these times. It's also where you can find a much better water cooler to have a chat around than the one you're going to find at the office. Most of all, hiking and camping are experiences you'll remember for a lifetime. You'll forget pretty pictures you *liked* on social media seconds after moving on to something else, but your tactile experiences in the outdoors will stay with you for a lifetime. It's the same reason why people still look through telescopes, when there are so many beautiful images available on the Internet to look at. You'll never forget the first time you looked through a telescope at the rings of Saturn, because that's an experience and it has meaning.



Bruce Lane



Waterfall at Payzant Creek Camp, Juan de Fuca Trail, May 9th, 2012; by Bruce Lane

Editorial Remarks



The RASC National Annual General Meeting concluded at the end of last month and there was a lot of online content to get through. Some of it is still accessible on the RASCanada YouTube channel. Our new RASC National representative, Nathan Hellner-Mestelman, gave a presentation on our position in the Universe: *Join the Cosmic Generation!* Laurie Roche distinguished herself at the AGM by being the person who introduced and did troubleshooting for all of the "Reach Out" portion of the presentations, like at the beginning of Chris Gainor's talk about the Apollo landings. Speaking of Chris, he's just finished a decade of service in various positions for RASC National (including as its president) and has been named a Fellow of the Royal Astronomical Society of Canada.

SpaceX has been lighting it up this month, both figuratively and literally, with a record number of launches; including the delivery of many new Starlink internet satellites into orbit. After a five week delay, SpaceX also made a cargo delivery to the International Space Station. Northrop Grumman's cargo resupply mission to the ISS, using their Cygnus spacecraft, was originally scheduled to occur in August, but the launch is now being kicked down the road to possibly sometime in October. Northrop Grumman uses Russian rockets and their first stage booster is made in Ukraine, which has resulted in them having some supply issues given ongoing war. The long anticipated, first take off of the Space Launch System rocket for the Artemis missions has been given a launch window between August 28th and September 6th. Artemis 1 will be an uncrewed test flight to the Moon and back.

This month's issue of *SkyNews* is going to be a bit more down to earth, with the focus on hiking and camping. It's something we've been doing for the last two July editions, based on a series of presentations at Astro Café years ago called: *What else do you do?* In this, the hiking and camping issue of *SkyNews*, we'll have more recaps from our Centre's activities, a short article about astrophotography while camping, an update on the recent leadership change at Roscosmos, as well as all the astrophotography and articles you've come to expect from the *Victoria Centre SkyNews*.

Bruce Lane: SkyNews Editor



President's Message for July



The first science images from the James Webb Space Telescope were released to huge fanfare last week. I'm not surprised that my social media was filled with the news, commentary, analysis, and silly memes. My favourite is the melding of Van Gogh's *Starry Night* into the SMACS 0723 galaxy cluster. What surprised me was how much the images caught on with the general public. The images are indeed beautiful, and the public relations teams know how to get the message right. But there is a clearly a desire, a fascination to follow the story of this telescope and its potential.

I used to be "*the general public*". When they went to the moon during the Apollo missions, I realized I had to learn all I could about astronomy. Most importantly, I decided to become a scientist. And through good fortune and a fair amount of work, I got to make a career as a research scientist - in geology rather than in astronomy, but my fascination with astronomy never left.

Is astronomy important? I really don't know. But science and science literacy certainly is, and quite possibly the James Webb Space Telescope will attract the general public to find out more. People will look at the beautiful images and ask what is going on. They will learn about how 30 years of science and engineering went into producing the images. They will find out about the scientific edifice which has built up over millennia to place the new research in context.

The first batch of images masterfully span the range of subjects that the space telescope will research: the birth of stars, the death of stars, the structure of galaxies, and the early universe. The fifth image, or actually spectrum, reveals an application that could only have been dreamed of when the instrument was designed – composition of an exoplanet spectrum. They weren't even sure that exoplanets could be located when the space telescope was first designed.

We amateur astronomers get to play an important role as more space telescope data get released. Let's keep up with the research and help our wider community understand what it means. Let's help with outreach events whenever possible. Let's do astronomy.

On that note, the Victoria Centre Astro Café went virtual for two years. It was a tonic to our isolated lives during the worst of the covid-19 pandemic. Many thanks to Chris Purse and Joe Carr for their devoted work to keep Astro Café up and running so well! In May, we ran our first attempts at hybrid meetings, in person at the Fairfield Community Centre and online over Zoom. The response has been very positive, and we will continue the hybrid Astro Café format every Monday evening (except statutory holidays) at 19:30 starting September 12. WE NEED VOLUNTEERS. The roles are not onerous, but they are essential. Each evening we will need a host and a tech. Please be brave. Please be generous.

Look Up,

Randy Enkin, President@Victoria.RASC.ca





M101, imaged May 26th and 29th/June 3rd and June 6th, 2022; by Scott Garrod.

Special Interest Groups

Getting Started in Astronomy

The beginners group reviewed the constellation Sagittarius and the Teapot asterism. In the middle of the month, during a spell of clear skies, a number of the group met at Cattle Point. Inspired by reports of a Moon and Antares sighting, it was only one of the reasons to meet. Not as tight a pairing of the Moon and Antares as early in the morning, but still pretty. As night set, we had views of the Summer Triangle, the Coat Hanger, Alberio, Alcor/Mizar ... the classics. For more information on this group, please contact David Lee at david@victoria.rasc.ca

Astrophotography

We reviewed a number of Ron Fisher's recent images of the Pelican Nebula and the Cygnus Wall. David also had pictures of C/2017 K2 (PanSTARRS) near a cluster IC4665, beside the constellation Ophiuchus.

In July, we welcome Casey Good, from Kitt Peak, to talk about his imaging setup and workflow. Casey offers courses through Kitt Peak and is an accomplished astrophotographer, with a number of APODs to his credit. For more information about this group, please contact David Payne at vp@victoria.rasc.ca.

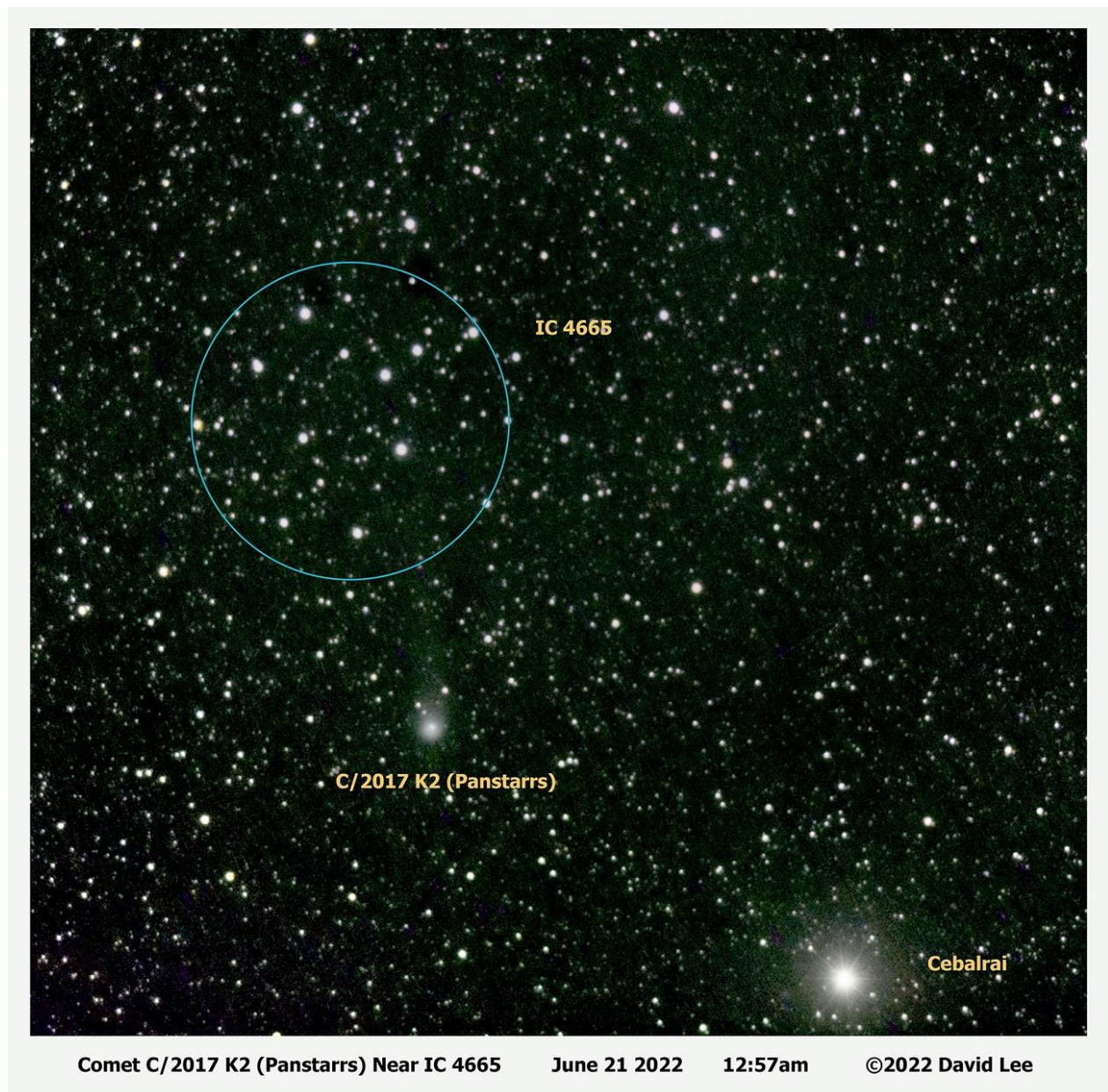
Electronically Assisted Astronomy

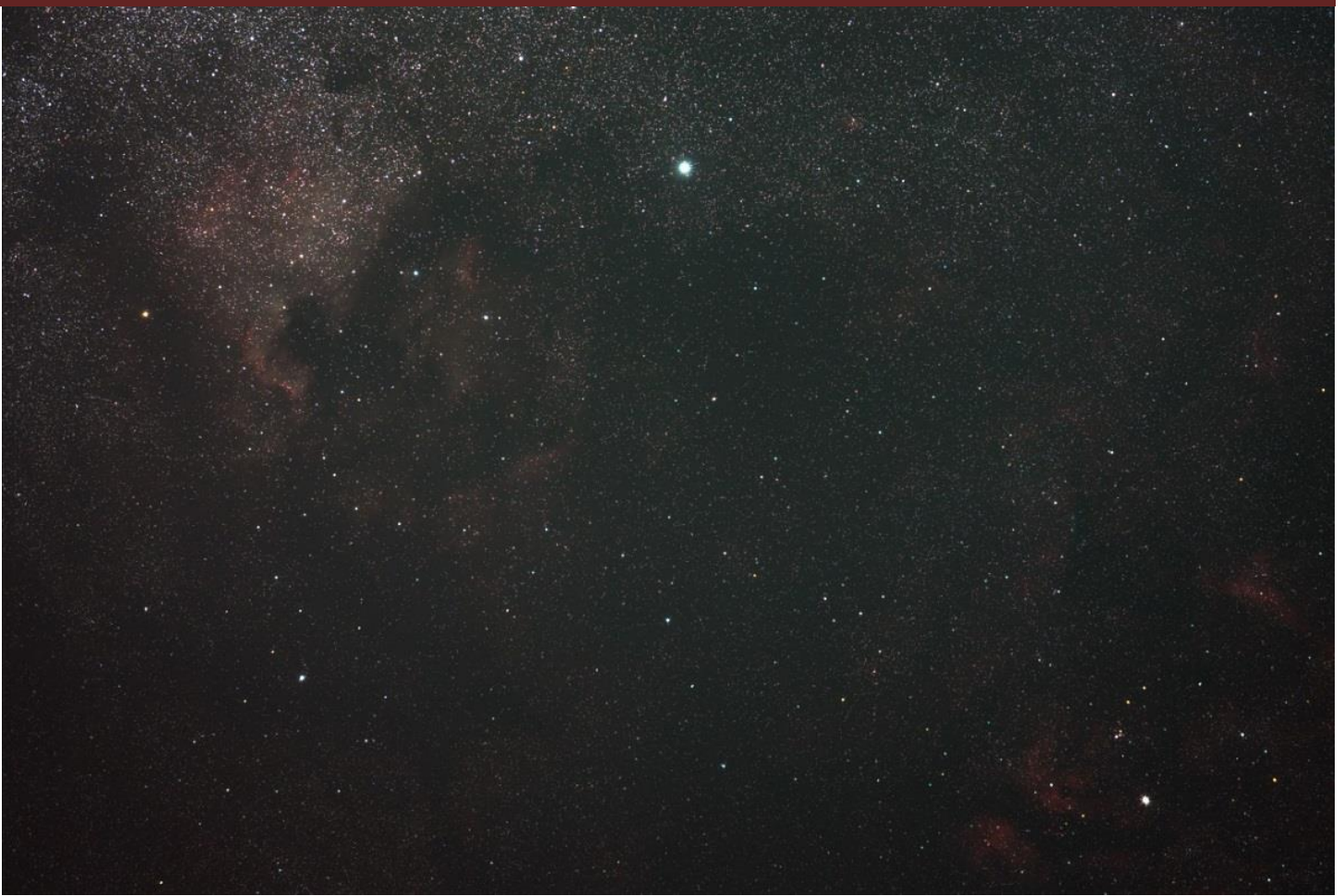
The CPC telescopes at the Centre of the Universe are now ready for being used in EAA. The EAA initiative at FDAO Star Parties will likely start in August. To volunteer or for more information on this group, please contact David Lee at david@victoria.rasc.ca

Makers

The Makers SIG is open for business to discuss member projects, as well as to answer questions associated with the repair and development of astronomical equipment. For more information about this group, please contact Jim Cliffe at jim@victoria.rasc.ca.

David Lee





Tent and Telescope

This image of the North America Nebula (NGC 7000) was taken during a camping trip, during my birthday (25 June), to Rath Trevor Beach in Parksville; combined with images taken at Cattle Point a month previous. Taking advantage of a fair lack of light pollution (Bortle 4 compared to the usual Bortle 5-6 around Cattle Point), I set up in the clearing at the Group Camping area. The Milky Way was reasonably clear in these conditions and M13 was quite distinct through my observing telescope (Celestron Omni XLT 120); much to the delight of those who were with me, who'd never actually seen anything better than a department store scope in action. Polar alignment with my Star Adventurer 2 was a breeze in the period just before evening nautical twilight, although it took another couple hours before it was dark enough to get good shots off.

Cygnus appeared over the treetops sometime around 2330, about the same time that it got dark enough to shoot. A bit more waiting was necessary to get the last tree branches out of the frame (as I was mirroring the same framing taken before), and then it was on to shooting in batches of 60, 30-second exposures. I managed to get about 180 exposures before switching targets to the Veil Nebula (which still needs another 2-3 hours of light for me to be happy with it). About 150 of those shots were worth keeping, with another 90 from the previous month's shooting at Cattle Point stacked together in DeepSkyStacker and stretched in Adobe Lightroom.

Camera: Canon RP (unmodded), Lens: Rokinon/Samyang 135mm f/2.0 (shot at f/2.8), Filter: Optolong L-Pro, Mount: Star Adventurer 2i Pro

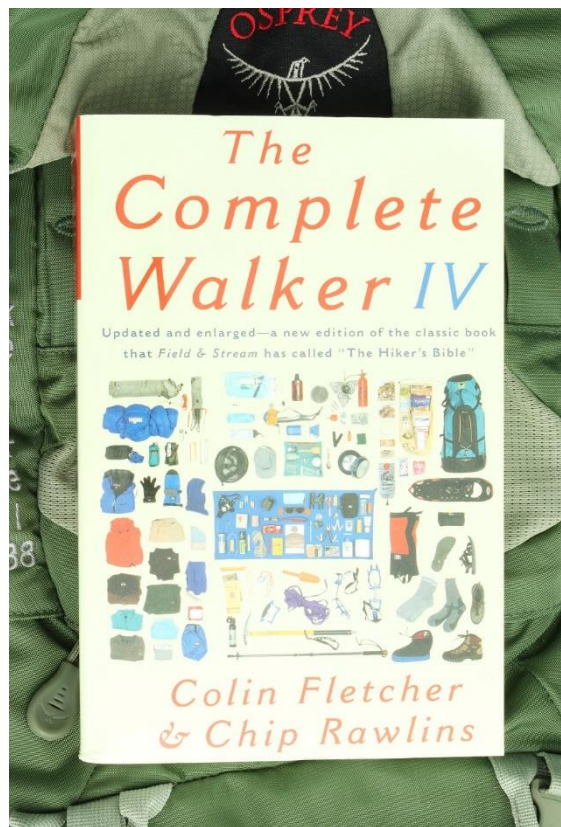
Exposures: 240x30s (120min total), ISO: 1600, Calibration Frames: Flats, Bias, Darks

Christopher Sulyma

From the Library

The RASC Victoria Centre Library is housed in the Astronomy Department's faculty lounge, located on the 4th floor of the Elliott Building, at the University of Victoria. It contains over 500 titles, curated by Alex Schmid, our RASC Victoria Centre Librarian. Alex is currently running our library in the same way the Greater Victoria Public Library runs its shut-in branch, driving around to do deliveries and pickups for our membership to provide access to books from the collection. For more information and to make a book delivery request, please contact Alex Schmidt at: librarian@victoria.rasc.ca

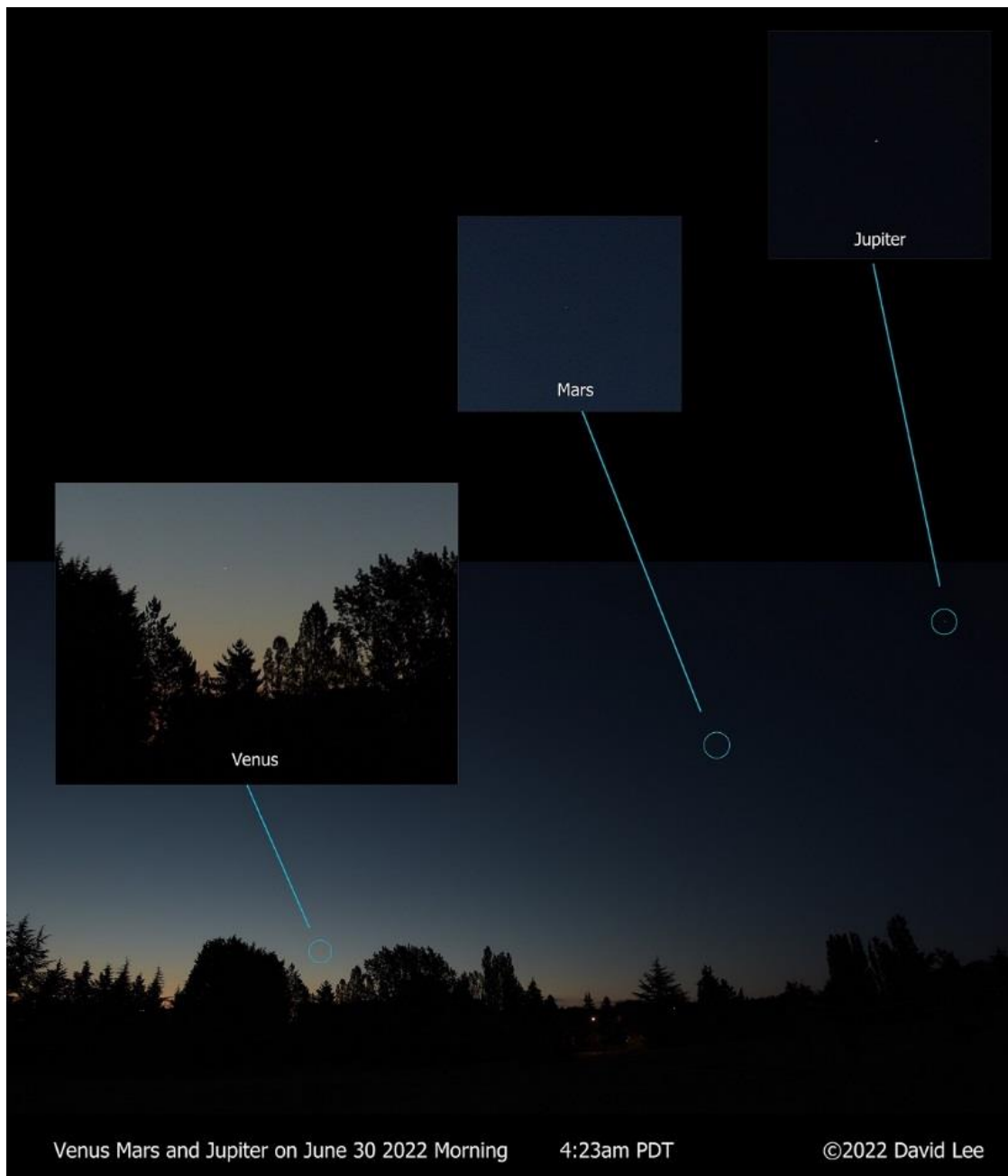
Our library covers many aspects of astronomy: observing, astrophotography, telescope construction, space exploration, astrophysics, and much more. Normally, the library is opened up during the social gatherings in the faculty lounge, after our monthly meetings, with coffee, juice, and cookies provided by our Centre. In the past I've been doing book reviews of the contents of our Centre's library, but until the resumption of our monthly meetings at the University of Victoria, I'll mostly be doing reviews of the astronomy books from my personal library, ones that can be purchased online or better yet at your local bookstore.



This month we're taking a closer look at *The Complete Walker IV*, by Colin Fletcher and Chip Rawlins. Called by some the *father of modern backpacking*, Colin Fletcher was a trailblazer in the *back to nature movement* in the outdoor community. After completing six years of service in the Royal Marine Commandos during World War II, Colin Fletcher tried to settle down but it didn't take. He hiked the wilderness of Africa and North America before it was a popular pastime. He hiked the length of California, laying the foundation of what would later become the Pacific Crest Trail. What cemented his legacy is that he wrote books about his travels and wrote one of the first great hiking guides: *The Complete Walker*. For people coming of age, looking to challenge themselves, he was throwing down the gauntlet along with a *do it yourself* guide. He wrote several updates of his famous hiking handbook, with this one the last to be published. He was struck by a vehicle in 2001, while out for a walk, and never completely recovered from his injuries. He died at the age of 85 in 2007. Chip Rawlins is an award winning writer who collaborated with Colin Fletcher to write the last edition of the Complete Walker. Rawlins is himself an accomplished backpacker and bushcraft instructor.

The Complete Walker IV is just that: complete. Often referred to as the hiker's bible, it's an incredibly comprehensive guide to the outdoors for backpackers. I wouldn't recommend carrying *the Complete Walker IV* in your backpack though, because it weighs as much as a computer laptop or a one liter water bottle. Chip Rawlins contribution as a tireless reviewer of kit added a lot to this edition. The best brands of backpacks suggested in this book are still the brands of backpacks that are the best choices today. Certainly there is always new kit being made for the backpacking community and anything made after 2002 won't be covered in this book, but what is there forms a strong foundation for any packing list. Additionally there have been a couple other books on the subject of ultralight backpacking that expand on the topic, as it is covered in this book. For those obsessed with bushcraft, they'd do well to also read *Bushcraft* by Mors Kochanski, who helped pioneer a parallel path in the *back to nature movement*. The Complete Walker IV is great resource for hikers and it's available from your local bookstore.

Bruce Lane





The Lion Nebula (SH2-132), June 17th, 2022, by Scott Garrod.

Hill and Dale (Observing on the Island)

The weather in June was a mixed bag, with temperatures cooler than usual for most of the month. Then at the end of June it was like an incompetent caretaker realized that they had forgotten to turn the heat on and then turned it on full blast, so we went from cool weather to a heat wave overnight. There were enough clear skies for our Centre's talented astrophotographers to harvest their data, evidenced by the two images by Scott Garrod in this issue, including his gorgeous work on the Lion Nebula (*seen above*). Lucky Budd photographed Rho Ophiuchi over the course of four nights and then collaborated with Dan Posey, who did the post production for the image (*seen next page*). Bill Weir alerted the membership to the possibility of observing and imaging Comet C/2017 K2 (Panstarrs) on June 20th, a challenge taken up by David Lee, who managed to image the comet despite the hazy conditions. At the end of the month Bill Weir was out at the Pearson College Observatory for a meaningful observing memorial event. David Lee capped his month off with some early morning imaging of the planets above the Victoria treeline (*seen previous page*).

The current restrictions up on Observatory Hill, with four observers allowed at the VCO and another two set up at the Plaskett Telescope parking lot, are the norm for the foreseeable future. Pandemic health restrictions are subject to change though, so if you're on the VCO observer's email list, watch for continuing updates.

A reminder that although the VCO belongs to and is for the use of the members of the RASC Victoria Centre. In the *Before Times*, MiCs (Members in Charge) ran both weekly scheduled and unscheduled sessions to take advantage of the weather, but for the foreseeable future observing sessions will be a lot less scheduled and less frequent. The VCO is located on National Research Council property. This means that all visitors to our observatory must be on our observer list and registered with the NRC. To get on the list, just contact Chris Purse (Membership Coordinator) at membership@rasc.victoria.ca and we'll see you up there on the Hill one of these nights.

Bruce Lane



Rho Ophiuchi photographed on June 19th, 29th, 30th, and July 1st, 2022 by Lucky Budd and processed by Dan Posey.

New Boss. Same as the Old Boss?

Things aren't getting much better aboard the International Space Station, with regards to Earth bound conflicts affecting operations. Dmitry Rogozin, the controversial head of Roscosmos who carried out a personal and abrasive crusade against the West, was replaced by Yuri Borisov. Borisov used to be the Deputy Prime Minister in charge of the military industrial complex of Russia. He was recently demoted, following a series of embarrassing public releases of state secrets, including having a folder about a top secret torpedo photographed by journalists during a briefing, and more recently having the deficiencies of Russia's defence industry laid bare during the recent invasion of Ukraine. While Yuri Borisov doesn't have the over the top populist style of his predecessor, it's pretty clear that he's still getting his marching orders from the Kremlin.

There was briefly some relief, immediately after the dismissal of Rogozin, when both Roscosmos and NASA announced that they would continue to transport astronauts aboard each other's spaceships. This new era of cooperation was unfortunately short lived. NASA condemned Roscosmos for publishing a photo of cosmonauts aboard the ISS, posing with flags used by the Russian proxies that represent the Russian-occupied regions of Ukraine's Donetsk and Luhansk oblasts. Yuri Borisov has since declared that Russia will no longer participate in the operation of the ISS, once their current agreement expires at the end of 2024. NASA is in a much better position today to transport people and cargo to the ISS, with the successful flights of SpaceX and continued testing of the Space Launch System that will form the backbone of the Artemis missions. For the moment at least, they'll continue to honour the current agreement to cooperate with NASA and other space agencies, with regards to the International Space Station, but it's difficult to see a successful future for Russia's space agency without financing from NASA, unless they're willing to move further under China's influence.

Speaking of China, a few days ago the Tiangong space station received a new addition: the Wentian science module. This module will substantially add to the laboratory space and living quarters of the Chinese space station. They will now be able to support up to six taikonauts for short term habitation and three crew long term. This capacity will be tested during the next crew rotation, scheduled for December. The downside of this mission is that it means yet another uncontrolled re-entry of a massive booster, sometime today, this one weighing over twenty-two tons. China doesn't use upper stage boosters to put payloads into orbit, resulting in this being the third uncontrolled landing of one of these mega-booster rocket stages. The good news is that the expected trajectory doesn't have it land on us. The vast majority of its expected *landing path* is ocean, with the exception of Indonesia, South America, and the west coast of Mexico.

While there was some interest by the director of ESA to bring in China as a partner in the ISS in 2010, the US government put their foot down. Afterwards, China was banned from access to the International Space Station, after the US Congress passed a law in 2011 prohibiting American aerospace institutions from working with the CNSA (Chinese National Space Administration) or the CASC (China Aerospace Science and Technology Corporation). A further US presidential executive order in 2020 extended the ban to American corporations and individuals even owning shares in corporations that are owned or connected in any way to the Chinese People's Liberation Army, including CASC. Should the ISS be abandoned *prematurely* (it's already long past its original best before date) and the establishment of the commercial Axiom Space Station falters, China could find themselves in a position where they have the only operational space station in orbit around the Earth.



Bruce Lane

In Closing



This concludes the hiking and camping issue of *SkyNews*. I would have liked to have had a few more submissions, but it's a busy time of year for most people, myself included. There were a few articles that never quite got written, despite interest in writing them that went back as early as right after last year's birding issue. I'm not certain if the next *SkyNews* editor will do a yearly *what else do you do* themed issue or if they'll even publish issues during the summer. That'll be up to them. Going back through the history of Victoria *SkyNews* publications, many editors only do a summer edition once before realizing that it's a lot of extra work during a time of year when they might not have a lot of extra time on their hands. If it hadn't been for the

Pandemic and the need to continue to create connections between our Centre members, I don't think I would have published any summer editions myself.

One thing I'm painfully aware of is that the wilderness I hike in today is not the wilderness my father or his father wandered through. It would be hard to find a place that is a pure, unspoiled natural setting, even in the most remote locales of Vancouver Island. The West Coast Trail was hacked out of the wilderness as a rescue trail for shipwrecked mariners and there are numerous sites along the trail marking the sinking of doomed ships. The eastern trail head of the North Coast Trail, used to be an outpost for logging operations. The western end of the trail has the ruins of farmland abandoned by Danish settlers, after government policies isolated and undermined their community, fearing them to be the beginnings of a Danish colony on the Island. The rusted ruins of steam donkeys, once used to pull felled trees through the wilderness, can be found along the West Coast Trail (*seen next page*). Our largest wilderness parks are typically created as a balancing act between the interests of industrial resource extraction, public recreation, and the preservation of the natural habitat. Most of the patchwork of today's wilderness creates a confusing prospect for animals that were once free to migrate from region to region. The building boom of the last few decades, to create new housing developments and communities, continues to push hard at the edge of the wilderness. Even in Antarctica, recent ice core samples from the most remote place on the planet were found to be contaminated with micro plastics. There are no more unspoiled natural habitats on Earth. As Bill McKibben stated in his award winning book *The End of Nature*, we're no longer living in a time where we can preserve the natural environment, because it's gone. Instead, it's up to us to decide what we want it to look like in the future, with regard to our yards, communities, parks, countries, and planet. We're now in a crisis of our own making, where we're scrambling to preserve our human habitat against an uncertain future and do our best to manage uninhabited places as idealized representations of a wilderness that has already been lost. For amateur astronomers, witnessing the ever shrinking dark skies available to them, it's certainly something they should be able to relate to.

It's star party season and *Summer Saturday* public outreach events (August 6th, 13th, and 20th) are continuing up at the Centre of the Universe and Plaskett Telescope, hosted by the Friends of the Dominion Astrophysical Observatory. These Saturday nights, at the Dominion Astrophysics Observatory and Centre of the Universe public outreach facility, are free of charge but do require event tickets (available online) to ensure crowd capacities are not exceeded. During the week, Tuesday to Friday, they're even opening up their facilities during the daytime: 10am-2pm. The Nanaimo Astronomy Society are having an impromptu star party of their own over this holiday long weekend. Also this weekend, the 86th Stellafane Convention of amateur telescope makers is being held on Breezy Hill, in Springfield, Vermont; with Dava Sobel as one of their guest speakers. Stellafane is one of those events that should be on the *bucket list* of every amateur astronomer, but especially those interested in the history of amateur astronomy and telescope design. The Cowichan

Valley Starfinders have their star party scheduled for August 26-27th, at Bright Angel Park. Elsewhere in the province, the Mount Kobau Star Party will be taking place August 20-28th. If you're traveling to the BC Interior to attend the event on Mount Kobau, you'd be well advised to keep yourself up to date on wildfire activity that might be going on in the area.

While it's great to see each other again, we need to do our best not to turn our gatherings into super spreader events by taking the simple health precautions we've become accustomed to over the last couple of years. Just because the government is not legally mandating that we protect ourselves during a global pandemic doesn't mean that you should be throwing caution to the wind (especially since covid-19 can be transmitted as an airborne particle on that wind). We're currently in the middle of the 7th wave of the gift that keeps on giving and our public health system is again being pushed to the breaking point. We might be tired of dealing with the pandemic but it's certainly not tired of us, especially now that so many of us are letting our guard down. Across Canada, we're seeing hospital emergency rooms and intensive care units turning patients away because they're overwhelmed. Ambulance wait times are up and healthcare workers that were already burnt out are leaving their professions in droves. Given the lack of resolve by the government these days, in the face of unhinged anti-science protesters and the demands of economic interests, it's up to us to keep our public healthcare system from breaking under the strain and causing even more front line workers to call it quits. In the end it was always up to us to do the right thing.



Bruce Lane: SkyNews Editor

Photography Credits

Cover: West Coast Trail, Bruce (left) and Andrew going through the hole in the wall at Tsusiat Point, Jun 30, 2008, by Veronika Irvine. Many of the beach sections require you to pay close attention to the tide tables to safely navigate, including this spot.

Page 2: Bruce doing a rope descent on the North Coast Trail, May 30, 2009; by Veronika Irvine

Page 3: Moving Across Another Pocket Beach on the North Coast Trail, Jun 1, 2009, by Bruce Lane. The typical trail here is up the cliff, down the cliff, across the short pocket beach, and repeat.

Page 4: Bruce Log Walking on the North Coast Trail, May 31, 2009; by Chris Lamb. Walking amongst the large rocks on some of the less than sandy beaches can make you want to take an alternate route on the logs. Trekking poles are handy for helping you keep your balance.

Page 5: West Coast Trail: Casualty Evacuation Awareness Board during trail orientation, Jun 28, 2008; by Bruce Lane. The motto going forward was: *don't be 23*. By the time we emerged on the other side of the trail, quite a few additional medical evacuations of hikers had occurred.

Page 6: West Coast Trail: Andrew and Bruce talking around the water cooler, Jun 2008; by Veronika Irvine. *Was this entire issue created so I could use this gag photo? It's not beyond the scope of possibility.*

Page 6: Waterfall at Payzant Creek Camp, Juan de Fuca Trail, May 9, 2012; by Bruce Lane

Page 7: Crop of Bruce Lane (SkyNews Editor) at 2013 RASCal Star Party in Metchosin, by Chris Gainor

Page 7: Lone Rock on Shoreline on Juan de Fuca Trail, May 11, 2012; by Bruce Lane

Page 8: Randy Enkin (RASC Victoria President) with Sextant, Feb 20, 2021, by Eva Bild.

Page 8: Apollo 17 Training, Ron Evans suited up for a simulation; Jul 21, 1972. Scan by Ed Hengeveld. Courtesy of NASA.

Page 9: M101, May 26 and 29/Jun 3 and Jun 6, 2022 by Scott Garrod. AT130EDT/ ZWO asi533MC Pro/ Ioptron CEM 70A. 69 x 300 seconds (5h 45')

Page 10: Comet C/2017 K2 (Panstarrs) with IC 4665 on Jun 20, 2022; by David Lee. Shot with Nikon D7200 and Nikkor 300/4 AFS lens with X1.4 Teleconverter. ISO: 1600; 39 - 20 second exposures at f/6.3. Processed manually registered and stacked in PixInsight. Final adjustments in Photoshop CC.

Page 11: North America Nebula (NGC 7000), Jun 25th, 2022, by Christopher Sulyma. Camera: Canon RP (unmodded), Lens: Rokinon/Samyang 135mm f/2.0 (shot at f/2.8), Filter: Optolong L-Pro, Mount: Star Adventurer 2i Pro. Exposures: 240x30s (120min total), ISO: 1600, Calibration Frames: Flats, Bias, Darks

Page 12: Posed Book, "*The Complete Walker IV*", taken in Editor's home on Jul 30, 2020; by Bruce Lane

Page 13: Venus Mars and Jupiter Jun 30, 2022 Morning by David Lee. Shot with Nikon D7200 and Nikkor 20/1.8 AFS lens. ISO: 800; f/4 at 1/20 second. Processed with Adobe Photoshop CC

I woke up early this morning in hopes of seeing more of the planetary parade. To date I have only seen Jupiter and Venus well, waking up just too late to see Mars well. This morning all three were clearly visible at 4:10am. I even caught a glimpse of Saturn in my binoculars. The coverage of my lens was not quite wide enough to include it. I believe Mercury may be a lost cause now 17 degrees from the Sun. Mercury is best and safest to view at twilight after the Sun has set, a cautionary note especially for optical observing.

Page 14: SH2-132, the Lion Nebula, Jun 17, 2022; by Scott Garrod. Askar FMA230/ WO Zenith Star 61/ZWO asi2600MC/ Ioptron CEM70A. 62 x 300 seconds (5h 15')

Page 15: Rho Ophiuchi photographed on Jun 19, 29, 30, and Jul 1, 2022; by Lucky Budd and processed by Dan Posey. *Imaged by me after dark, right before it set over 4 nights from my back deck, with a Samyang 135 lens into a zwo asi294mc pro. No filters.*

Alerted by Bill I pulled out the star tracker and tried to find the comet after midnight. It was fairly high up in the cul-de-sac but being at the end of the driveway I struggled with the bright LED light standard. My solution while imaging at home is to block the light with a black photographic umbrella on a light stand that seems to work well. The skies were less than perfect with the clouds meandering through the frames. I took 90 - 20 second frames but only used 39 due to the clouds. I was still able to find the comet along with IC 4665. It's a pretty combination, I'll have to revisit the region visually with my small refractor while I have a chance. It was easy to spot using Beta Ophiuchi or Cebalrai.

Page 16: Apollo 17 Training, Jack Schmitt (left) tips a rock sample into a bag held by Gene Cernan, during training at the Cape. On the Moon with the suit fully inflated, Jack would have had a relatively difficult time raising his arms this high; getting a sample into a bag would be easier if Gene held the bag lower. Note the geology hammer in Gene's shin pocket and the SESC in the pocket on the side of SCB. A communications unit can be seen in the background between Jack and Gene. July 1972. Color scan by Kipp Teague. Courtesy of NASA.

Page 17: Buff Orpington Chicken, Jul 30, 2022; by Bruce Lane.

Page 18: West Coast Trail: Steam Donkey Ruins on the way to Michigan Creek, Jun 28, 2008; by Bruce Lane. The steam engine was powered by burning split wood, allowing steel cables to drag felled trees through the forest on a system of pulley wheels.

Page 20: Tsusiat Falls on the West Coast Trail, Jun 29, 2008; by Bruce Lane.

Call for Article and Photo Submissions for the August Issue

SkyNews is looking for submissions of astronomy photos and articles for the August issue of our Victoria Centre's magazine. Send your submissions to editor@victoria.rasc.ca

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