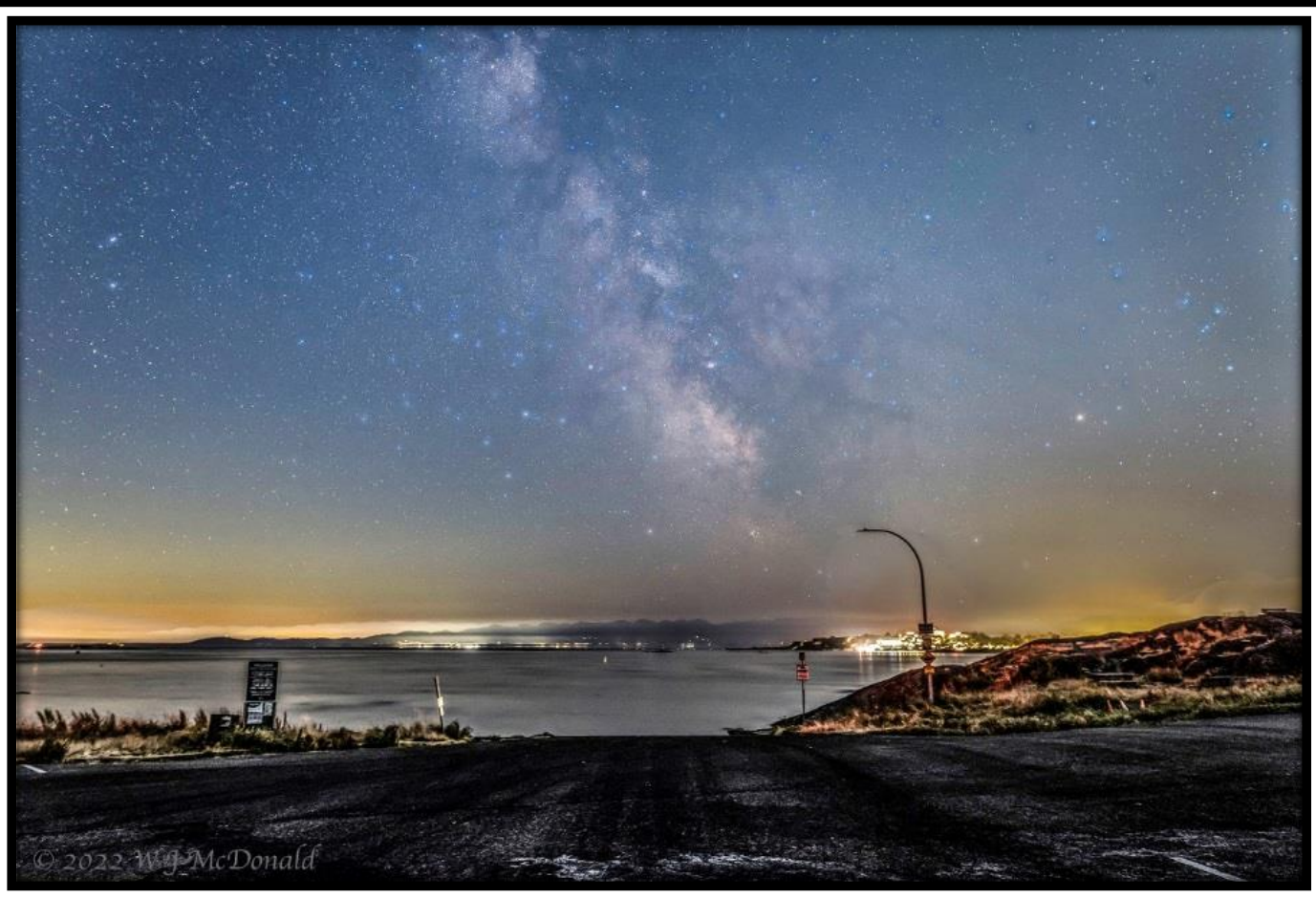
SKYNEWS



Milky Way at Cattle Point, taken July 28th, 2022; by John McDonald.

Star Party Season

August is the peak of the star party season. The new moon of August offers the best combination of warm weather for camping and observing, the best expectations for clear skies for observing and imaging deep space objects, and a bit of distance from the *not much darkness* of the Summer Solstice. September would be better for darkness, but worse for weather. July is generally not quite as good for weather as August, but there's hardly much in the way of true darkness necessary to appreciate the night sky.

Star Party Field on Friday, 2012 RASC Star Party, Aug 17, 2012; by Malcolm Stringer.

A decade ago, RASC Victoria hosted its annual star party in Metchosin, from August 17-19th. The gate to the Metchosin Cricket Field, behind the city hall, was opened at noon, for the first amateur astronomers and curious locals to begin arriving on site. It was the first year that our annual star party decided to stop charging for admission, relying solely on donations instead. The generosity of both the campers and visitors ensured that it was a tradition that continued. On Friday, we gathered at the bandstand, at the north end of the field, for the official opening of the star party, followed by door prizes and the evening's guest speaker.

The guest speaker for the first night was Dr. J.J. Kavelaars (Senior Research Officer at the NRC Herzberg Institute of Astrophysics). As an archive scientist with the Canadian Astronomy Data Centre, the world's largest repository (by data volume) of astronomical imaging data, he touched on its role in astronomy. His primary subject was CASTOR (Cosmological Advanced Survey Telescope for Optical and UV Research): the space telescope that was expected to take over from the Hubble Space Telescope.

After the guest speaker, there was a guided telescope talk to introduce people on the field to the various instruments in use, before Sherry Buttnor used a green laser pointer to give a tour of the night sky (*Astronomy 101*). The skies were mostly clear, but unfortunately, just as in the years before and since, it was another evening dominated by the afternoon winds being funneled through the Cricket Field. With the Metchosin Mistral or less poetically named *Parry Bay Pommeler* blustering across the field, making it all but impossible to do any imaging and difficult to much in the way of observing.

Despite the weather, there were almost ninety people in attendance for the first evening, many of them locals coming out to see what was going on in Metchosin. There were people who drove out to our yearly star party from other parts of Greater Victoria. Beyond the amateur astronomers from our own RASC Centre, there were a bunch that came down from *Up Island* and a few regulars from the Mainland. Some, like Mike Krempotic from Port Alberni, were people I only saw at star parties, yet every time I ran into them it was like going to coffee with a close friend you got together with all the time.

On Saturday, telescopes were set up to look at the Sun, both dedicated hydrogen alpha filtered solar telescopes and telescopes like my Schmidt-Cassegrain, with a solar filter slapped onto the front of it. We also rented a small building on site to do some astronomy workshops during the day. David Lee gave a lecture on spectroscopy, while Nelson Walker gave a talk about observing lists and awards. Laurie Roche even organized some activities for the children at the star party.

While the weather during the daytime was pleasant, things took a turn for the worse in the evening. Scott Mair did his best to conduct a binocular tour of the night sky, but the clouds had already rolled in over Metchosin. Dr. Cassandra Fallscheer, from the Herzberg Institute of Astrophysics, was our guest speaker for Saturday night and gave a talk on space junk. Rain started coming down hard during her lecture, resulting in the crowd taking cover under the bandstand. Those who had not already stowed away or covered up their gear were sent scrambling. After that, most of the attendees packed up their kit to go home. For the few that stayed and stayed up, they were rewarded with some clearing conditions in the very early morning, although there were still a lot of high, thin clouds marring views of the night sky.

Due to the weather, the RASC Centre's 2012 Annual Star Party will not go down as a great experience in amateur astronomy, but it was still nice to connect with fellow enthusiasts, even if at times only to gripe about the weather. Even when you choose to schedule your star party at a time of year when the weather is expected to be nicest, the weather often chooses to ignore your plans. That or you get blindsided by wildfire smoke. Having the two star parties on Vancouver Island was good, because even if the weather ruined one of them, the other one often had good weather and even more importantly you had the opportunity to attend two star parties a year. Unfortunately, the RASC Victoria Council decided to stop hosting our own star parties after the last one in 2019, at St. Stephen's Anglican Church in Central Saanich. While the Pandemic is far from over, many annual star parties have returned in 2022. This includes the Island Star Party at Bright Angel Park (August 26-28), hosted by the Cowichan Valley Starfinders Astronomy Club and supported by RASC Victoria. While the RASC Victoria Centre will no longer be hosting our own annual star party, the plan going forward is to pool our resources with the Cowichan Valley group for the Ione Island Star Party.

Star parties represent a reward for RASCals after a long year of doing public outreach, where we can just together as a group, but with the focus on the amateur astronomer instead of doing public outreach. These sites are often open to the public and some people still choose to spend their time doing public outreach, but for most it's a time to dedicate to our own personal observing and astrophotography. Star parties are the ultimate expression of the amateur astronomy experience. You bring your optics to a field; camp out away from the city lights with your fellow astronomy enthusiasts; and spend the nights looking up at the sky. There are guest speakers, door prizes, workshops, presentations, and sometimes even food available on site. Throughout the night, you often find yourself collecting in small groups to see what other people are up to and chat. Afterwards you're left with friendships, memories, observations, images, and probably a lost eyepiece cap or two. After a weekend of becoming part of a larger community of amateur astronomers, you can always expect a number of previously unconnected amateur astronomers to join RASC Victoria.

Bruce Lane

Pillars of Creation, imaged over 4 nights (July 11, 23, 24 and 25); by Lucky Budd.

Editorial Remarks

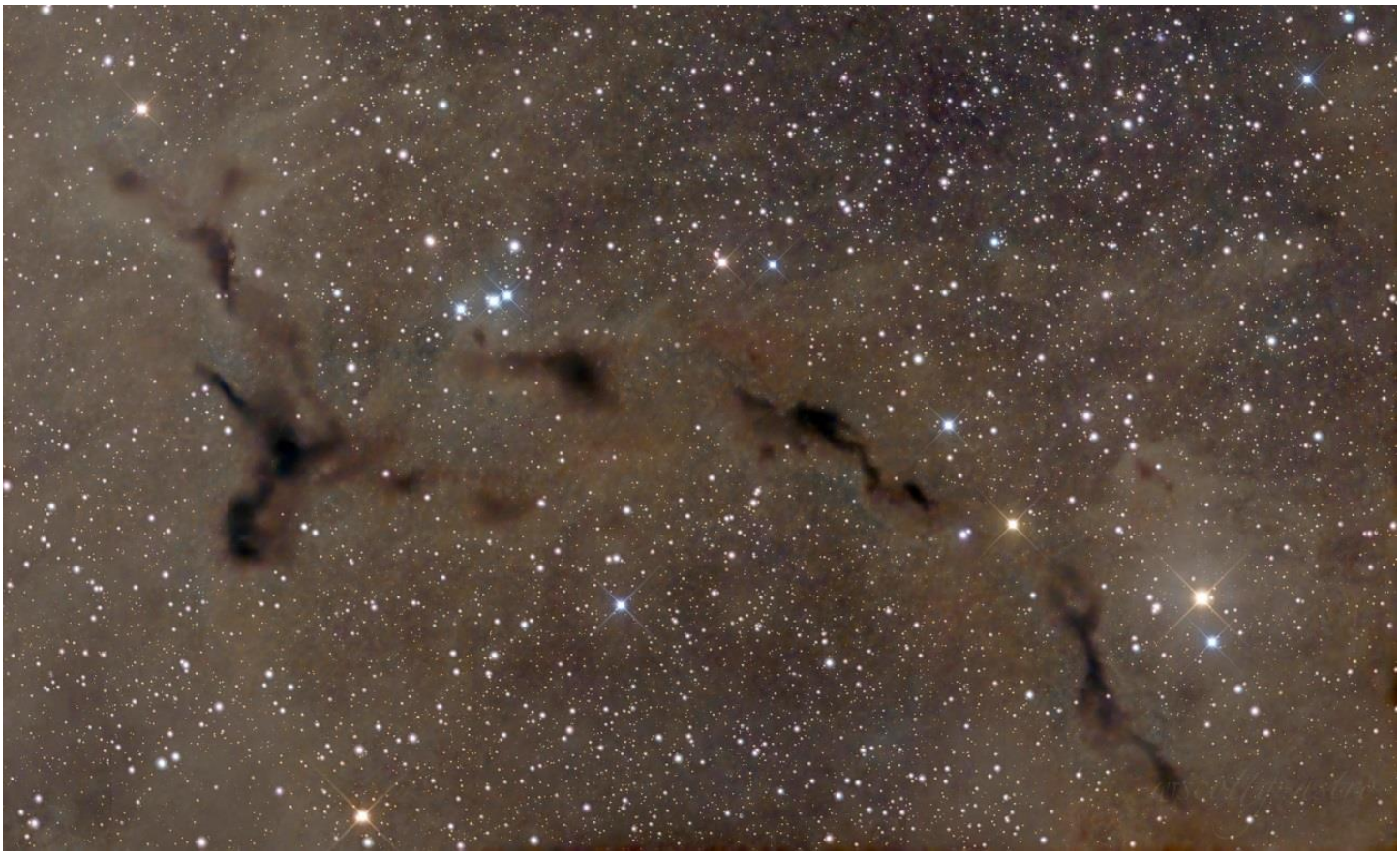
Looking back on 2012, with our retro lead article, it was an eventful year for RASC Victoria. The Transit of Venus in June was the event of a lifetime; especially given the unlikelihood of any of us being around for the next one in 2117. Conditions were windy, but we got the clear skies when we needed them. We had our Astronomy Day at the University of Victoria and our November Annual General Meeting was held at the Moon Under Water Pub. It was a particularly active year of public outreach, with many of our RASCals volunteering at events like the Hobby Show, Buccaneer Days, setting up in Centennial Square for the annual Earth Walk, the Strawberry Festival, the Boy Scouts' Beaveree at Camp Barnard, Symphony Splash, the Saanich Fair, Fairfield Fall Fair, taking part in programs at four provincial parks, and there was

even a solar telescope set up at the Vancouver Island Music Fest. This was on top of volunteering with our telescopes at municipal parks and libraries, going up to the Centre of the Universe on Saturday nights, and all the school events. I think my first real interaction with our then RASC Victoria Centre President, Laurie Roche, was after a day of doing public outreach before the beginning of Symphony Splash, staked out in the sun for the tourists under the statue of Captain Cook, with a solar filtered telescope. Laurie helped me carry a considerable amount of astronomy equipment back to my car, through the packed crowds and unsympathetic event security in the summer heat, from the Captain Cook's statue to the Menzies Street Parking Lot on Kingston Street. That kind of leadership had something to do with me getting involved in the RASC Council, after Laurie asked me to become the next treasurer.

With all the news and excitement this year dominated by the James Webb Space Telescope and upcoming Artemis Mission, it's not a bad idea to spare a moment to think about the future of CASTOR, the Canadian space telescope initiative that was being widely discussed in 2012, including at our annual RASC Victoria Star Party. Given the lifespan of the James Webb Space Telescope, CASTOR could very well be among the instruments that takes over from it, expected to launch sometime in the late 2020s or possibly later, depending on delays. It's especially important, given that its UV capability is missing from other proposed space telescopes that might be launched around that time. Billed as the *Canadian Space Telescope*, CASTOR is currently at Phase 0 of development, with a STDP (Space Technology Development Program) study currently underway. What emerged from the *Canadian Space Astronomy Workshop* in 2006 as a long range project for a UV capable, wide field, space telescope, has had numerous white papers and studies written for it over the last decade. Delays in the development of the James Webb Space Telescope and the Pandemic have certainly caused further delays for the numerous other large astronomical projects. Other space telescope projects, like Euclid (ESA) and WFIRST (NASA), are also in development with Canadians participating in these missions as well, but for many Canadians in the astronomical community we're still waiting for CASTOR.

In this issue of *SkyNews*, we'll have more recaps from our Centre's activities, an observing story from Dorothy and Miles Paul, as well as all the astrophotography and articles you've come to expect from the *Victoria Centre SkyNews*. Just to be clear, I have it on good authority that none of the astronomy images in this issue are in fact a slice of chorizo, unlike those found in other unnamed publications.

Bruce Lane: SkyNews Editor



The Seahorse Nebula (Barnard 150), July 13th, 2022; by Scott Garrod.

President's Message for August: Summer Outreach

I had the pleasure of spending a Saturday evening with Sherry Buttnor, demonstrating the 16 inch reflector up at the Centre of the Universe. It is humbling being in the dome with her, as Sherry has been operating and demonstrating the 16 inch since 1987! For most of the time, we had the telescope trained on the moon. Once the moon got too low, we moved to M13 - the Hercules cluster. Everybody who looked in the eyepiece exclaimed some version of "*Wow*!" Sherry often told the people, "*You'll never look at the moon the same way from now on*." Brock Johnston that night had one of the 8" Dobsonians set up behind the Plaskett Telescope, with a steady stream of people coming for a glimpse of Saturn. A woman who had never before seen Saturn through a telescope said she was in tears afterwards, she was so awestruck.

Astronomy outreach is fun! The people who come to star parties and other outreach events are keen to learn, and they appreciate our efforts to help them see the sky. Sometimes it feels like a lot of work, but once you are at it, it is a real high.

So make the decision to help out at our outreach events!

We need people for Saturday nights at the Centre of the Universe (contact Garry Sedun, *vp2@victoria.rasc.ca*); especially if you are willing to set up your telescope.

We need volunteers for the Vancouver Island Star Party, an hour north of Victoria at Bright Angel Park, August 26-27 (contact Dave Payne, *vp@victoria.rasc.ca*). Also, plan to go to the star party – Dave has been working with the Cowichan Valley Starfinders Astronomy Club to create an excellent program of speakers and events.

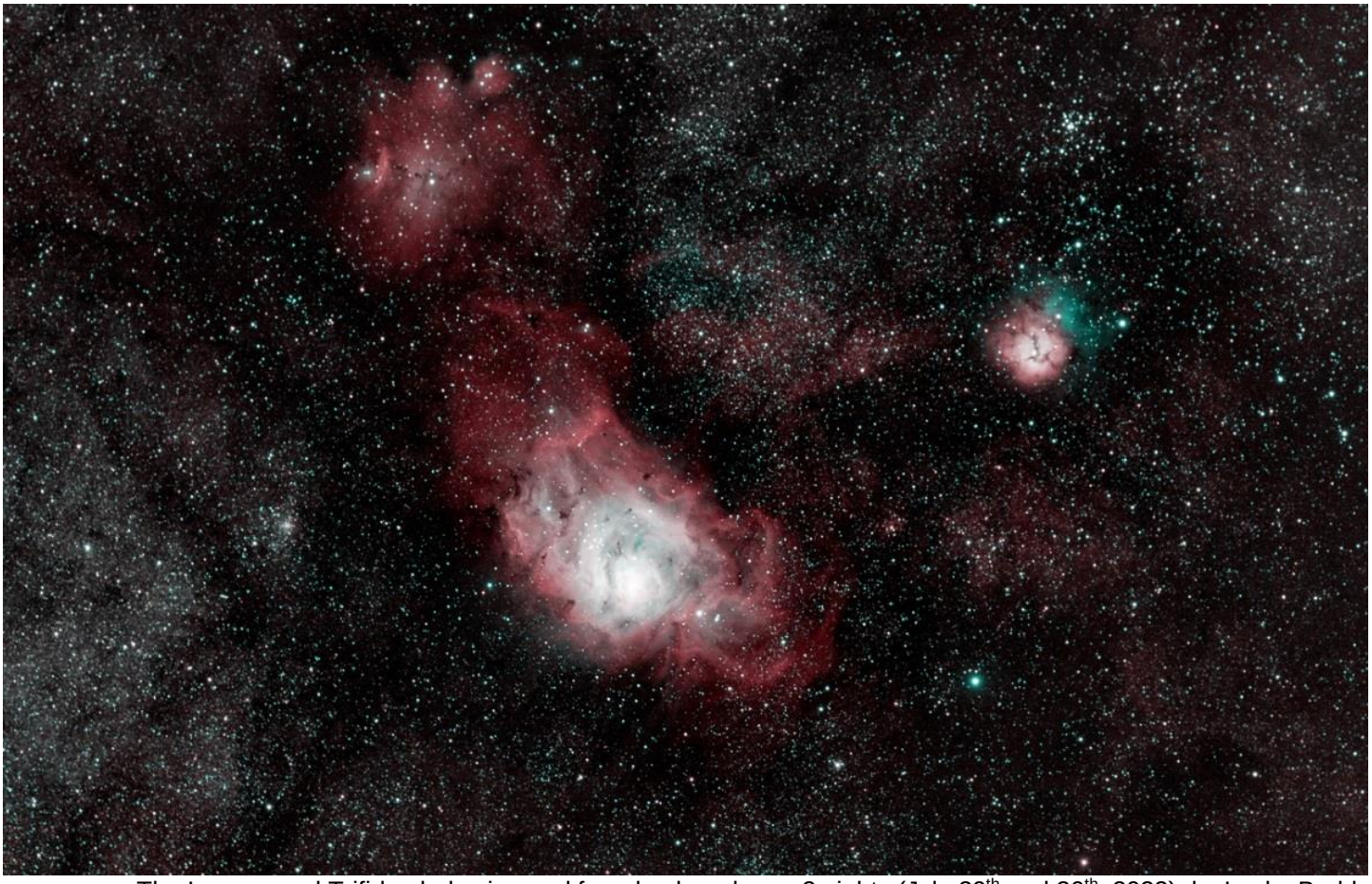
We need volunteers for the Saanich Fair at the Saanich Fairgrounds, September 3-5 (contact Lauri Roche, *roche.lauri@gmail.com*).

We need volunteers for the Fall Fairfield, Sept. 25, right outside our Astro Cafe venue at the Sir James Douglas School yard (contact Reg Dunkley, *pastpres@victoria.rasc.ca*).

At these events, you can typically take a shift of a couple of hours and answer questions from the eager public. I have seen members with the whole range of background and experience taking on these roles, and everybody has done well. Just show a bit of the enthusiasm that I know all RASC Victoria Centre members have.

Look Up,

Randy Enkin, President@Victoria.RASC.ca



The Lagoon and Trifid nebulas imaged from backyard over 2 nights (July 29th and 30th, 2022), by Lucky Budd.

Special Interest Groups

Getting Started in Astronomy

In August, the beginners program reviewed Cygnus and Aquila; although we did a bit of wandering around to look at other favourite summer sights. At the beginning of the SIG, Jill introduced us to a binocular double star program she just finished with the Astronomical League. Along with a description of the program, she also presented a nice introduction to double stars, which I know will lead to additional presentations in the future.

Hopefully, taking advantage of the wonderful stretch of clear skies, we are planning an outing to view the variable star Algol, an eclipsing binary. With a period of just under 3 days, we have a good chance of viewing a whole cycle. For more information on this group, please contact David Lee at *david@victoria.rasc.ca*

Astrophotography

In the July SIG, we welcomed Casey Good (Kitt Peak) to talk about his imaging setup and imaging workflow. Casey offered a number of PixInsight quick tips, which were well received. We soon found out that there's often a better way of doing things that you wouldn't have thought of on your own. Casey also gave us a status report of the fire that spread to Kitt Peak in June. Although the wildfire was under control within two weeks, it was a close call. No telescopes were damaged, but a more thorough inspection will need to wait, while the electrical and network infrastructure is rebuilt. For more information about this group, please contact David Payne at *vp@victoria.rasc.ca*.

Electronically Assisted Astronomy

The EAA initiative at FDAO Star Parties got underway in August. To volunteer, contact David Lee. Brock, Ken, and David have already started to help, by reviewing and familiarizing themselves with the gear. 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, and to answer questions associated with repair and development of astronomical equipment. For more information about this group, please contact Jim Cliffe at *jim@victora.rasc.ca*.

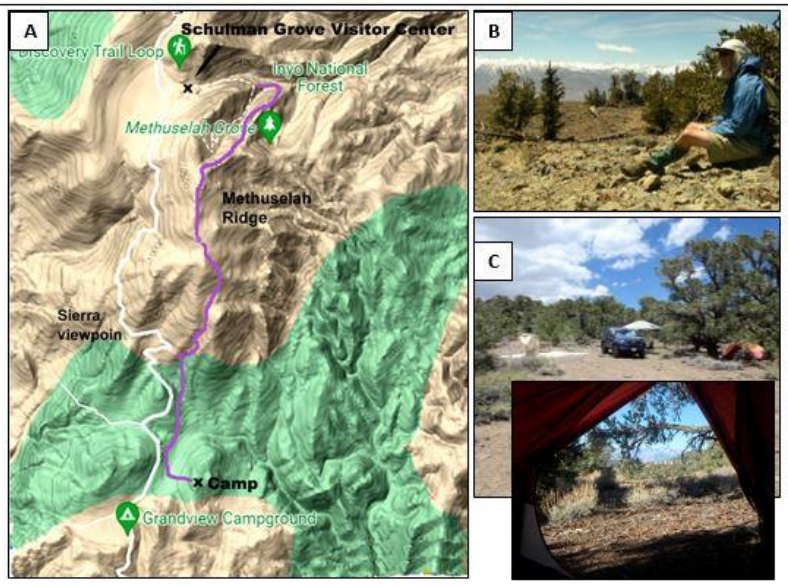
David Lee

Summer sky from 2600m

After 3 years of '*southern sky starvation*', Miles shifts into low 4-wheel drive, and eases our heavily laden Tacoma pick-up along the last and steepest section of the off-road track leading to our destination – a relatively open area on the ridge at the end of the track. We found this camping and observing site in the White Mountains of California decades ago. At 2600 m (8500 ft) elevation, latitude ~37degrees north, it offers beautiful scenery with numerous possibilities for hiking across the countryside during the day and unobstructed views of the southern sky, from NE to SW at night (*fig1 below*). Prior to the Pandemic, we had been returning to the site as often as we could each year, usually in May and October (the best times for weather), for excellent deep sky observing (in late spring Omega Centauri floats above the southern horizon). There is no light pollution, no dew, and typically a SQM (Sky Quality Meter) reading of 21.55-21.85. Usually at least half of the nights we spend there are clear and sometimes 12 or more of them in a row. So here we are, late June 2022, having driven 1600 km from Victoria over several days, through mostly beautiful country, and into a persistent heat wave over Southern California. Even at this altitude, the afternoon temperatures climb as high as 32C. Our reward comes at night, when the air cooled to very pleasant lows ~15C, giving us two weeks for viewing the deep sky free from the incessant noise and light pollution of Victoria.

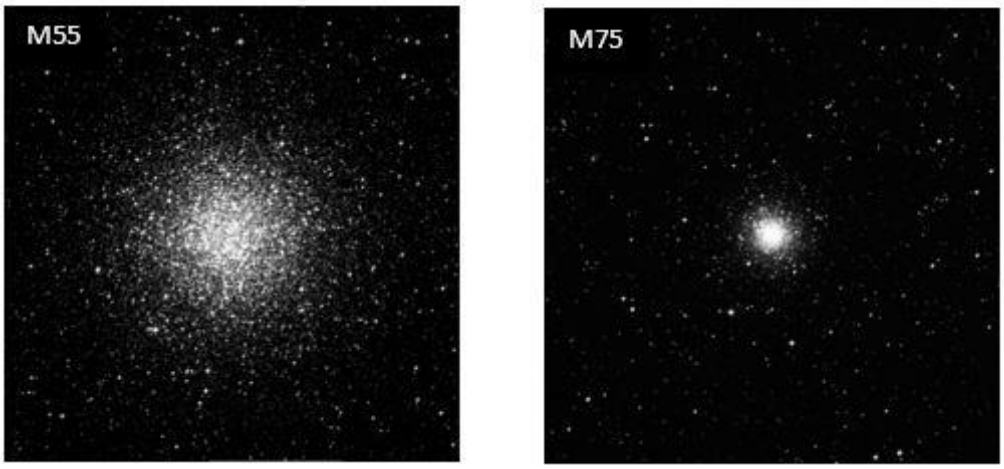
In the morning, competing attractions vie for our attention: the desire to relive the previous night by reviewing and completing observing notes while still fresh in our minds; preparing for the coming night's observing; or heading out after breakfast in the fresh morning air for a cross-country hike before lunch. Exploring White Mountain and the vistas from the upper elevations takes one through the vastness of geological time. You go from the Precambrian, 700 Ma (1) to the present. You see unexpected biological adaptations in this desert mountain range. Most notably are the thriving populations of our planets oldest (longest living) organisms, the White Mountain Bristlecone pines, *Pinus longaeva* (1,2). Our favorite route includes descending along *Methuselah Ridge*, our name for the section of White Mountain's spine, between the Schulman Grove Visitor Center and Sierra Viewpoint, then cross-country back to camp. The view to the east recedes across ranges of mountains hundreds of kilometers into Nevada, while to the west the majestic, steep eastern side of the Sierra Nevada extends southward to Mount Whitney, appearing almost within reach across Owens Valley far below (*Fig 1A, B*). This year, the prevailing heat more than our advancing age curtailed our passion for hiking. Our longest excursion was to the Grand View Campground, frequented by astronomers year-round when weather permits, (*Fig 1A*) to see whether any of our astronomy friends were set up. These include people whom we've met quite regularly there at spring and fall over the years, coming up from the areas of Los Angeles, San Diego, or San Francisco Bay. Only one from the Bay area had decided to brave the midsummer conditions.

Fig 1. A) Google map showing section of White Mountain Road between Grandview campground and Schulman Grove Visitor Center, with our cross-country route along Methuselah Ridge to our camp traced in red. B) The Sierra crest from Methuselah Ridge. C) Our camp from the south, telescope west and tent east of pick-up with shade canopy over kitchen; Sierra crest to the south-west in sight from inside tent. Clouds dissipate after sundown.



When the Sierra Crest blocks the Sun's direct rays, at seven-forty pm, long before sunset, the air temperature begins to drop, and we uncover the telescope, to allow its 20-inch quartz mirror to start cooling. After that it's time for dinner, changing into warmer clothes, collimating the telescope, and generally preparing for observing that can proceed more leisurely as we have hours to wait for darkness.

Fig 2. The contrasting southern-most Messier GCs: M55 – Class XI and M 75 – Class I, the most concentrated. Field 20' for both. Images from *The STScI Digitized Sky Survey*.



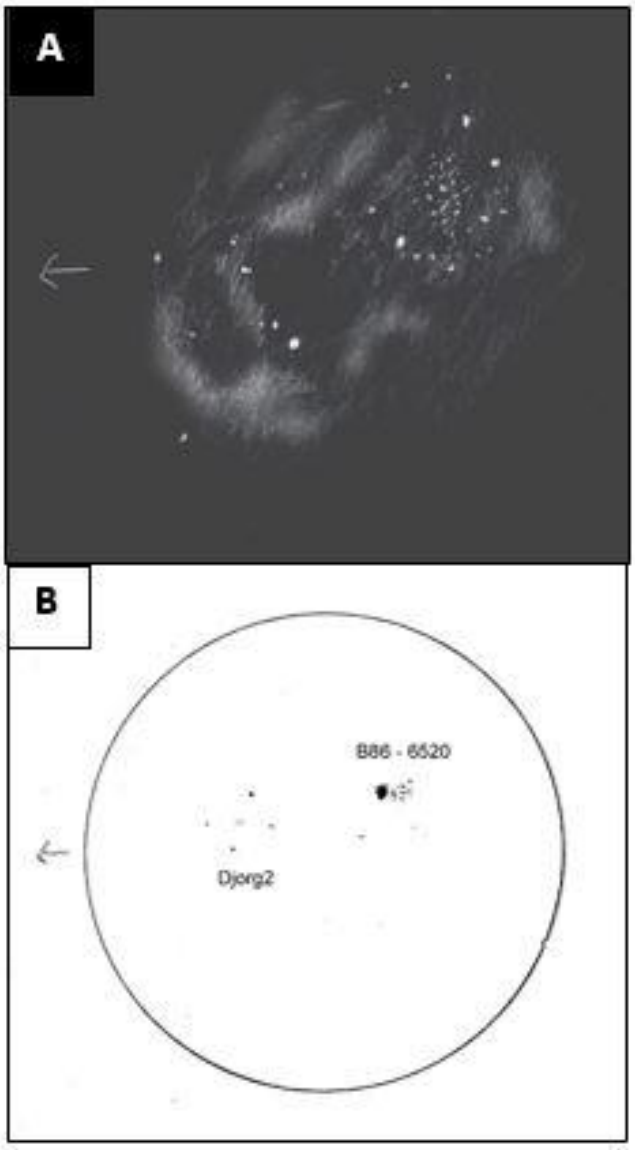
As twilight fades, we point our binoculars and telescope toward the emerging glow of Sagittarius in the Milky Way, with the first stops on the majestic birds of the deep sky, the Swan (M17) and the Eagle (M16), followed by the Triffid (M20) and Lagoon (M8) Nebulae. The transparency is so good that, as the sky darkens, numerous wisps of downy feather shed by the Swan can be glimpsed far from her body and the wings of the Eagle can be seen clearly without the aid of an OIII filter. In these conditions, the nebular intricacies of the Trifid multiply and the Lagoon's blackness deepens. From the Swan, we scooted 1.1 deg ~north to see her jewels (STF 2306), one of our favorite multiple stars. It's an easy bluish-reddish double separated by about 10" magnitudes 7.2/7.9 and very hard to miss. Miles discovered it '*accidentally*' years ago, while star hopping to M17. But wait! The blue star itself is a close double with a separation of about 1", and to split it requires a dark sky with excellent seeing and relatively high magnification, but it's worth the effort.

Comparing the globular clusters M22 and M28, on either side of the *Tea Kettle's* top, is always fun; as is the comparison of M4 and M80 in Scorpius. This leads us to a comparison of the two most southerly of the Messier GCs, both in Sagittarius. M75 is Class I, most concentrated in the Shapley-Sawyer Concentration Classification, and M55 is Class XI, near the other end of the scale, and the least concentrated of the Messier GCs (*Fig 2*). There are no Class XII Messier GCs, so to pick up one in this class we go to M3 (Class VI) and have a "*dark chocolate-coffee bean break*" to let the sky drift 5 degrees, until NGC 5466 (Class XII) comes into view at the same latitude as M3 (3).

Returning south, we looked at 2 GCs, NGC 6528 and 6522, in the '*steam*' rising north of the *Tea Kettle's spout* in the same 1-degree FoV as Alnasi (gamma Sgr). Although their magnitudes are similar, 6528 at half the diameter appears slightly fainter. Then Miles suggested Djorgovski2 (ESO 456-38), two degrees farther north, an obscure GC belonging to a group of very low metallicity globular clusters, which originated during the formative stages of the Galaxy in the galactic bulge close to the Galactic center (4). Its compact faint glow proved not too difficult to spot in the rich star field, west of one of our favorite double objects, NGC 6520/B86; a charming open cluster flanked on its west by the dark nebula known as the *Ink Spot*. NGC 6520 is a young cluster of magnitude 9, 5' in diameter, with ~25, 9-12 magnitude stars amongst the 60 or more stars which glow clearly in the cluster's centre. Superimposed on the Large Sagittarius Star Field, these objects make a visually rich scene and a fascinating challenge to sketch (*Fig 3*).

Up next for comparison were the planetary nebulae NGC 6818, the "*Little Gem*", north of Barnard's Galaxy in Sagittarius, and NGC 6369. The "*Little Ghost*" is just WNW of 51 Oph and superimposed on the Pipe Nebula. Although the "*Ghost*" at mag 11.4v and 28" diameter is 2 magnitudes fainter than the "*Gem*" (mag 9.3v and 22" x15" diameter), both of them appear very bright and are best viewed without a nebula filter. The *Ghost* observed as a ring and the *Gem* as a disk.

M7, well known, very bright, and much observed, is the most southerly of all the Messier objects. But there is much more to observe with M7 than a bright cluster of stars. The GC NGC 6453 (Class IV) that appears near the west edge of M7 is only about 3000 ly from the center of the Galaxy. Its brightest stars are 14th magnitude. A little farther to the west is the open cluster NGC 6444, a relatively unspectacular large cluster of faint stars. More interesting are B287, a dark nebula



near the southern edge of M7, and the planetary PK 356-4.1, which is only 2" in diameter making it appear stellar. We confirmed its identity near the NE edge of M7 by "*blinking*" it with a nebula filter.

Before leaving this region of Scorpius, we had a peek at two contrasting *planetaries* nestled in the curve of the tail. NGC 6302 (the '*Bug Nebula*'), 4 degrees west the Shaula ('*the Stinger*'), is a bright bipolar PN and structurally one of the most complex. It justifies viewing at various magnifications, both with and without a nebula filter. Then, 2.2 degrees SE of the '*Bug*' and 3 magnitudes fainter, is the structurally simpler ring-shaped NGC 6337 (51" diameter), appearing like a doughnut.

The hours pass quickly. Time to put eyepieces away, cover the scope, and sit outside sipping Ruby Port, while feasting our eyes on the whole expanse of sky above us, before retiring to the tent. Only a few hours remain before sunrise and we need some sleep before the start of a new day.

Dorothy & Miles Paul

Fig 3 A) Dorothy's first attempt to sketch a dark nebula: B86, lower left on west side of NGC 6520, upper right; arrow to west; magnification150x. Sketched over 3 nights of observing, inverted and contrast adjusted in Photoshop.
B) Globular cluster Djorjovski2 glows faintly, framed by a trapezoid of 9-10 mag stars, 20' west of B86-6520 within the 40' field of 13mm Ethos.

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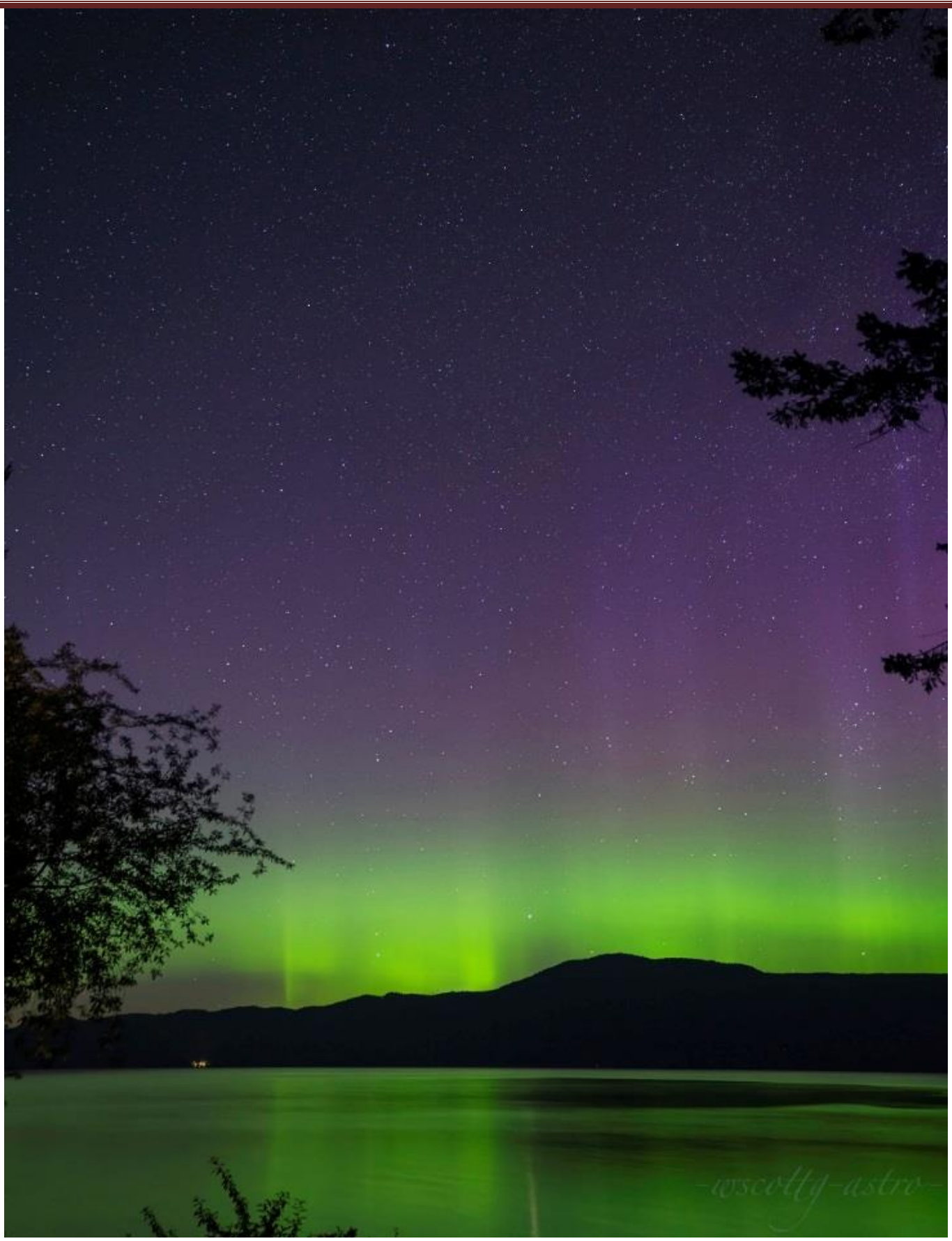
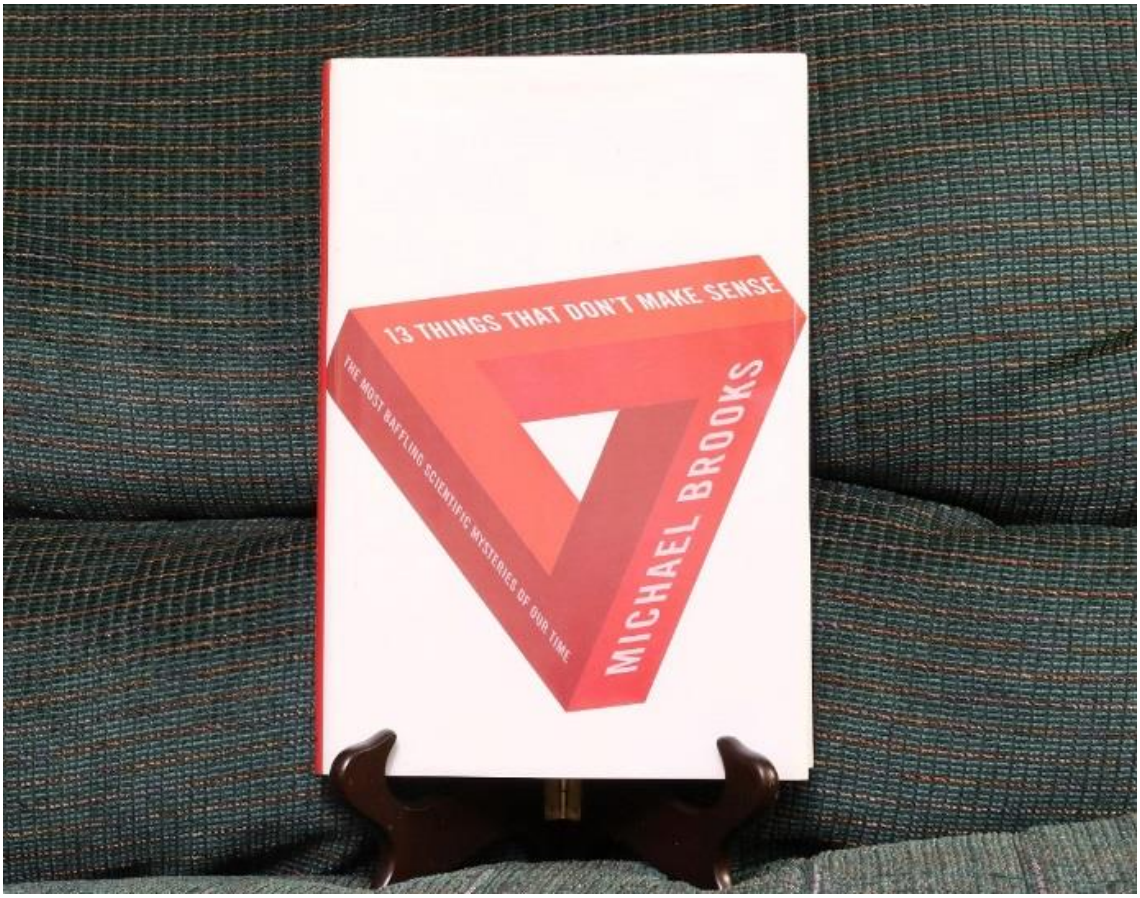


Aurora from Lasqueti Island, BC. July 2nd, 2022; by Scott Garrod.

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 *13 Things That Don't Make Sense*, by Michael Brooks. Brooks is a science writer and author from the UK, with a PhD in quantum physics, who is widely published in many science and news publications. He branched out from a career as an editor of *New Scientist* and a prolific writer of science articles for many publications, by writing his first sci-fi novel: *Entanglement*. While still continuing to write fiction and science news articles, he branched out even further to write a series of six non-fiction science books: *13 Things That Don't Make Sense, the Big Questions: Physics, At the Edge of Uncertainty: 11 Discoveries Taking Science by Surprise, the Secret Anarchy of Science: Free Radicals, Can We Travel Through Time?, the Quantum Astrologer's Handbook*, and *the Art of More: How Mathematics Created Civilisation*.

While still continuing to do all of that, Michael Brooks somehow found the time to be politically active enough to create the *Science Party* in 2010, together with an editor for *New Scientist*. This leap into politics was mostly in reaction to the anti-science antics of UK Member of Parliament, David Tredinnick, who was called out for submitting homeopathic medicine and astrology expenses. This was in addition to pushing to have both homeopathy and astrology to become standard treatments by the National Health Service. The fact that the ruling government of the day appointed this Member of Parliament to the Health Committee didn't sit well with a lot people in the scientific community. Michael Brooks' brief moment in politics didn't result in him winning a seat or even that many votes, running against David Tredinnick, in what was largely seen as him participating in a political protest party. After another easy electoral victory, David Tredinnick was soon appointed to the Science and Technology Select Committee in 2013. The controversial MP retired just before the 2019 UK election, after representing Bosworth in Parliament for thirty-two years.

While not exclusively about astronomy and physics, nearly half of the *13 Things That Don't Make Sense* are, which given the number of unsolved questions of the cosmos could have been much more. Chapters in this book discuss the possibility that *Viking 1* discovered life on Mars; the oddness of the significantly different distances from the Earth of the two *Pioneer* spacecraft; the WOW signal; the search for dark matter; and the gravitational constant. Given that any of the thirteen subjects covered in this book could easily be a book by themselves, Michael Brooks does an outstanding job both researching and communicating the issues around them. *13 Things That Don't Make Sense* is excellent read that challenges what we know about science and it's available by order from your local bookstore.

Bruce Lane

Hill and Dale (Observing on the Island)

July gave us a few clear nights around the new moon, followed by some cloudy nights, before things got quite warm in the Greater Victoria region. There might not have been a great deal of darkness, due to the time of year, but clear skies were plentiful. It's a time of year, when lot of us make plans to go away for the weekend, often to cottages or campgrounds, as did Scott Garrod imaging the aurora borealis from Lasqueti Island. Dan Posey spent some time Up Island, where he imaged the North American Nebula (*seen left*). Bill Weir made a couple of trips out to the Pearson College Observatory, on July 21st and 26th.

RASC Victoria started the month off with the Henrietta Leavitt Memorial Horizon Watch. It's become an annual event during the last decade, where amateur astronomers gather at Cattle Point to watch the Fourth of July fireworks being launched from Friday Harbour on San Juan Island. This year, while there were rain and clouds, the skies did clear up in time for the small group present to observe the fireworks.

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

In Closing

The weather this August has been hot, with a bounty of clear skies and the accompanying mosquitoes in many locations. The annual Perseid meteor shower was less than spectacular owing to the timing of the full moon, allowing only the brightest fireballs to be visible. The last super moon of the year wasn't quite so super for that reason. We've had a few cloudy patches, including some thunder showers, something hopefully we don't see more of on the weekend of the upcoming star party in Cowichan, although the weather forecasts are calling for some mixed sun and cloud. This being the Island Star Party at Bright Angel Park, from August 26-28th, hosted by the Cowichan Valley Starfinders Astronomy Club and RASC Victoria. On the Mainland, the Mount Kobau Star Party is taking place from August 20-28th. If you're planning to attend a star party this summer, please ensure you keep informed on the status of wildfires around your travel route and destination. Also, while it's fun to get out and gather with your fellow amateur astronomers, you'd be well advised to remember that the Pandemic hasn't ended. Given the lack of testing and tracing by our provincial health authorities, despite being in the middle of the seventh wave of covid-19, we're still in the *choose your own adventure* stage of public health mandates. It's up to you to make good decisions about hygiene and personal protection, when you either attend or organize public outreach events and star parties.

On Observatory Hill, *Summer Saturdays* at the Plaskett Telescope and Centre of the Universe are continuing to be hosted by the Friends of the Dominion Astrophysical Observatory. The Hill is also open to visitors during the daytime, from 10am-2pm, Tuesday to Friday, up until August 29th. RASC Victoria will have a tent and tables at the Saanich Fair on the Labour Day Weekend, along with solar telescopes. Last, but not least, Astro Café returns on September 12th.

In a very short time, on August 29th, the Artemis 1 mission should be launching from the Kennedy Space Center (weather permitting). From the awkward beginnings of the NASA led mission to return to the Moon, announced in 2004, it wasn't clear if it was anything more than a public relations stunt, given the lack of funding for the ambitious plan. Early on it felt like they were barely funding the program enough to keep the lights on and buy a hat to hand around for donations. Things got even worse when the US Congressional sequester took the air out of the sails for a time at NASA. The focus on SLS (Space Launch System), Orion, and the James Webb Telescope meant that a lot of other projects were crippled or ceased to exist, due to budget cuts. Given all the adversity this program has faced over the years, it's amazing to be so close to being able to witness the takeoff of the first uncrewed (except for a plush Snoopy and Sheep) mission around the Moon and back. This is a warm up for the big event in 2024, which is scheduled to include a Canadian astronaut, with whoever that is suddenly becoming the Canadian to have traveled the furthest out into space.

Bruce Lane: SkyNews Editor

Photography Credits

Cover: Milky Way at Cattle Point, taken Jul 28, 2022; by John McDonald. *Cattle Point is becoming a well-used urban star park. It is not free of light pollution but as this image shows, it is a lovely site.* Image taken using a Canon Ra camera, with Sigma 24mm A lens, mounted on an Ioptron Skytracker. 11 - 30 sec exposures of which 6 were with a diffusion filter.

Page 2: Star Party Field on Friday, 2012 RASC Star Party, Aug 17, 2012; by Malcolm Stringer.

Page 3: Made in the Shade, temporary home of Charles Banville at the 2012 RASC Star Party, Aug 17, 2012; by Malcolm Stringer.

Page 4: Pillars of Creation, over 4 nights (July 11, 23, 24 and 25); by Lucky Budd. 9 hours of 25 second subs on my Evolution 8 Alt-Az. I used a .7 focal reducer and idaz NBZ filter into an asi294 MC pro. Stacked in and processed in APP with SHO colour palette, StarNet++, Photoshop, and Lightroom.

Page 5: Crop of Bruce Lane (SkyNews Editor) at 2013 RASCal Star Party in Metchosin, by Chris Gainor

Page 5: *The Apollo 17 spacecraft (right) crosses paths with the S-IB booster intended for the first manned Skylab mission.* Aug 23, 1972. Scan by J.L. Pickering. Courtesy of NASA.

Page 6: The Seahorse Nebula (Barnard 150), Jul 13, 2022; by Scott Garrod. 61X 300 seconds, 5hours AT 130/ ASI2600MC Pro/ Ioptron CEM70

Page 6: Randy Enkin (RASC Victoria President) with Sextant, Feb 20, 2021, by Eva Bild.

Page 7: The Lagoon and Trifid nebulas imaged from backyard over 2 nights (Jul 29 and 30, 2022) by Lucky Budd. Shot using a ZWO ASI294MC Pro, with Idas NBZ filter, attached to a Sharpstar61 refractor, mounted on a Star Adventurer Pro.

Page 8: Apollo 17 Preparations: *techs prepare the flight rover for a final fit check*. Aug 4, 1972. Scan by J.L. Pickering. Courtesy of NASA.

Page 12: Aurora from Lasqueti Island, BC. Jul 2, 2022; by Scott Garrod. Single frame 20seconds, ISO 800 Sony a7RIII / Sony f2.5, 16-35 GM, @24mm

Page 13: Posed Book, "*13 Things That Don't Make Sense*", taken in Editor's home on Aug 24, 2022, by Bruce Lane

Page 14: North America Nebula (NGC7000) dual optical tubes, Jul 27-28, 2022; by Dan Posey. *This is 12h35m of exposures (73x5m with a Canon 6D at iso 1600 through a Canon 100-400mkii lens at 400mm f5.6 and 78x5m with a Canon Ra at iso1600 through an Askar FRA600 at 416mm f3.85) shot across two nights while co-mounted on my CGE Pro. Calibrated with bias, dark and flat frames*

Page 15: "Hawk", Ameraucana Chicken, Jul 30, 2022; by Bruce Lane

Page 17: Chorizo, Mar 3, 2016, by Colin. Fair use, courtesy of Pixabay.

Call for Article and Photo Submissions for the September Issue

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

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