

SKYNEWS



Victoria Centre RASCals on ferry to 2003 Vancouver General Assembly

A Tale of Two Assemblies

When the Vancouver Centre hosted the annual General Assembly of the Royal Astronomical Society of Canada, back in 2003; it was a very different world. Over a dozen RASCals from the Victoria Centre crossed the Salish Sea to attend that event. Many of the people, seen the cover photo above, who attended that GA are still members of the Victoria Centre. They're also seventeen years older and hopefully wiser, more often than not moving on from their old careers and embracing new life challenges along the way.

In 2003, the General Assembly was celebrating the 100th anniversary of their "Royal" charter. Attendees were treated with a dinner cruise of the Vancouver harbour and a visit to University of British Columbia's Large Zenith Telescope in Maple Ridge. The six meter aperture telescope had a unique liquid design that required the telescope to always be pointed to the night sky directly overhead. The Large Zenith Telescope was one of several of these innovative telescope designs created, making use of a constantly rotating pool of liquid mercury. It's a very inexpensive way to build a large aperture

telescope, although the restrictions to pointing can be a bit limiting. The LZT was once the 3rd largest telescope in North America and largest liquid mirror telescope in the world, but was recently decommissioned.

2020 wasn't the General Assembly that any of us wanted, least of all the organizers of RASC Vancouver. With Covid-19 cancelling every event in its path, it was up to volunteers to organize a virtual general assembly. There were a few technical difficulties, but they presented us with three good speakers for the Sunday afternoon event. Canadian astronaut, Joshua Kutryk talked about his training and hopes for the future of manned space exploration; MIT Astrophysicist, Sara Seager gave a lecture about TESS (Transiting Exoplanet Survey Satellite); while Bob McDonald, the popular host of Quirks & Quarks show on CBC Radio, gave a generalized talk on the history of advancements in our perception of how the Universe works. Homemade toques were virtually presented to the guest speakers, to be later shipped to them.

The 2020 GA also marks the end of an eventful RASC National presidency for Victoria's own Chris Gainor. After first serving as the 2nd and then the 1st Vice President of RASC (2012-2018), Chris followed the line of succession to become the national president in 2018. He helped oversee the restructuring of *SkyNews* magazine (*Ed. the other one*), saw them establish an online website, and our national president even stepped up to be the editor for an issue during their editorial team transition. During his time as president we've seen continued work the remote telescope project, the introduction of a member's code of conduct, the establishment of the Dornier Telescope Museum, the addition of the 29th Centre in the *Nickel City* of Sudbury, and the Society dealing with all the issues resulting from the impact of Covid-19 on RASC. The work of a Past President is hardly a formality at RASC National. Chris will be heading up the Awards Committee, working on the Editorial Board for RASC publications (including the other *SkyNews*), and continue working on his own literary projects about the history of space exploration. Hopefully, he'll also manage to find the time to get behind a telescope during his *not quite* retirement from the RASC National presidency.

Bruce Lane

Editorial Remarks



Many of us watched the SpaceX manned launch on Saturday, as Bob and Doug's spaceship successfully launched from the US, on route to the International Space Station. The jubilation was short lived though, as a pall now hangs over the skies of American cities, due to race based police brutality, wide scale protests, and the subsequent police attacks against protesters and the media alike. It's enough to make me wonder how thick the rose coloured glasses were that we were wearing, when we looked back at the Apollo 11 anniversary. The Cold War competition between superpowers has often been portrayed with a narrative of an effort that united humanity, but the years of preparation for that mission and the year of the mission itself, were some of the bloodiest years of the civil rights movement. We revel in Kennedy's "*We choose to go to the Moon*" speech in 1962, without considering that he was assassinated only a year later. The year before the

launch of Apollo 11 also saw the assassination of both Martin Luther King Jr. and Robert Kennedy. It's a tragedy that in the same country where they were trumpeting a moment of shared human accomplishment - the most iconic triumph of manned space exploration - society's institutions actively strove to ensure many of the people there were still being denied their basic human rights.

All the problems on this tiny, *pale blue dot* mean nothing to the Cosmos. Even with our largest telescopes, it would be exceptionally difficult for someone orbiting our closest stellar neighbours to even see the Earth, let alone understand how troublesome humans can be. Technically, we've been broadcasting signals into space since before World War II, so shouldn't someone on a planet around Arturus be able to binge watch the original series of *Star Trek*? It seems very

unlikely for even the most resourceful of *Arcturians*. The signals that have gone into space weren't focused transmissions and were of such low power that they'd barely register as much of anything at all over that much distance.

Just to equal the faint signal from Voyager 1, as it's currently being picked up by radio telescopes on Earth, it would take transmitters over twenty times more powerful than the best television UHF transmitters currently in use, just to repeat Voyager's faint signal so it could be received by a large radio telescope, on a planet orbiting Alpha Centauri. Even if there are much more advanced aliens that could somehow pick our barely recognizable signals out from the noise, they'd still have to reverse engineer a television or similar device to properly interpret those signals, assuming that they even have compatible senses of seeing and hearing.

That means we can all enjoy a sigh of relief. Aliens in orbit around Pollux aren't judging us, after watching Fonzie jumping over a shark with water skis on *Happy Days* (*Ed. I am though*). Other than the proof of concept signal, blasted into space from the Arecibo Observatory in 1974, and focused on the current position of the globular star cluster known as M13 (but not even close to where it will be when the message reaches it in 21 000 years), the residents of this *pale blue dot* haven't done much of anything to merit any investigation by potentially interested parties orbiting nearby stars. As much as I might be able to craft a sound theory that at this very moment in Montreal a baby is crying, I can't hear that baby from Victoria, without accessing onsite communications in Montreal.

What does any of this mean? It means that space is really big; big enough that when the continual onslaught of soul crushing news in 2020 gets to be a bit too much to handle, you can always grab your binoculars or telescope and get lost for a while in the Cosmos. In this issue of *SkyNews*, we'll have more recaps from our Centre's activities, 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 June



The abrupt onset of the pandemic introduced a wave of uncertainty. There is a growing realization that the impacts will continue for some time. Most Victoria Centre activities including monthly meetings, VCO observing sessions, and Saturday Night Star Parties at the DAO have been cancelled. Astro Cafe has established a virtual presence on victoria.rasc.ca and a weekly Zoom webinar. The Island Star Party, Merritt Star Party, and the Mount Kobau Star Party have all been officially cancelled. The Saanich Fair is morphing into an online entity. UVic has announced that lecture halls will be closed until at least January 2021.

This has left us staring into a void. But by suddenly escaping the treadmill of everyday life, many were given an unexpected gift of time. This has allowed RASCals more opportunity to step out into the stillness of the night, look up and savour the arrival of starlight. While the days of the week became less relevant, our awareness of the rhythm of the Solar System became more pronounced. RASCals have been sharing wonderful images and sketches of the lunar cycle as well as evening and morning dances of the planets.

Zoom webinars have proven to be an effective tool that helps reduce the sense of isolation and allows us to share our enthusiasm, knowledge and imagery. As a result the Victoria Centre has acquired its own Zoom Pro license which will increase our capacity to meet on line. During this pandemic the astronomical community has rallied and is posting a rich source of offerings on the internet. RASC National frequently hosts interesting webinars which are usually archived on the

RASCanada YouTube site. This site will also be used to live stream a virtual General Assembly event between 11AM and 2PM PDT on Sunday, June 7th. Dr. Sara Seager and Bob McDonald will be delivering presentations. UVic has moved its Cafe Scientifique online and is also hosting an Astronomy Open House webinar every Wednesday for the summer at 7:30 PM.

During a recent Victoria Centre Council Meeting we explored options of what to do while we wait for a vaccine. We are currently in the process of sending the VCO's 16 Inch RC scope for repair and may have an alternate scope available in the meantime. If activities resume at the VCO, however, attendance will initially be restricted to a very small number. This would enable the site to be safely used more for observing/imaging activities than social interaction. Active Observers would be required to bring their own eyepieces to avoid spread of CoVid19.

This eyepiece issue may be problematic when Saturday Nights at the DAO resume. One alternative to sharing an eyepiece is to try Electronic Assisted Astronomy (EAA). This technique is "casual astrophotography" that enables a camera to automatically stack images on the fly and display them on a tablet or monitor. It avoids complex post processing and would allow fainter deep skies objects to be viewed by the public without lineups. With an internet connection EAA has the potential to share live imagery to a meeting or webinar. The challenge of CoVid19 has served as a catalyst to explore this option. An interesting overview of EAA is found on this link.

While we are waiting for face to face outreach to resume, we could set up static astronomy displays showcasing our astrophotography. David Lee recently delivered an astronomy orientation course using Zoom and similar programs might be considered. In the meantime, if you have something that you would like to share on the Virtual Astro Cafe please send it to president@victoria.rasc.ca. In closing, I would like to thank hosts Barbara and Kurt Lane, Chris Purse, and John McDonald for agreeing to extend the Astro Cafe into the summer season.

Wishing you good health and useable skies this Summer

Reg Dunkley

Astro Café: Now Online



The weekly social gathering of amateur astronomers on Monday nights, known as Astro Café, is now online. As with many groups, we're trying to find ways to still function as a Centre, without meeting in person. Members are posting their astrophotography, short articles, as well as links to astronomy stories from the Web. Sadly you'll have to make your own coffee and the only cookies are those your browser picks up when you visit our website. You can access the *Virtual Astro Café* at: <https://victoria.rasc.ca/virtual-astro-cafe/>

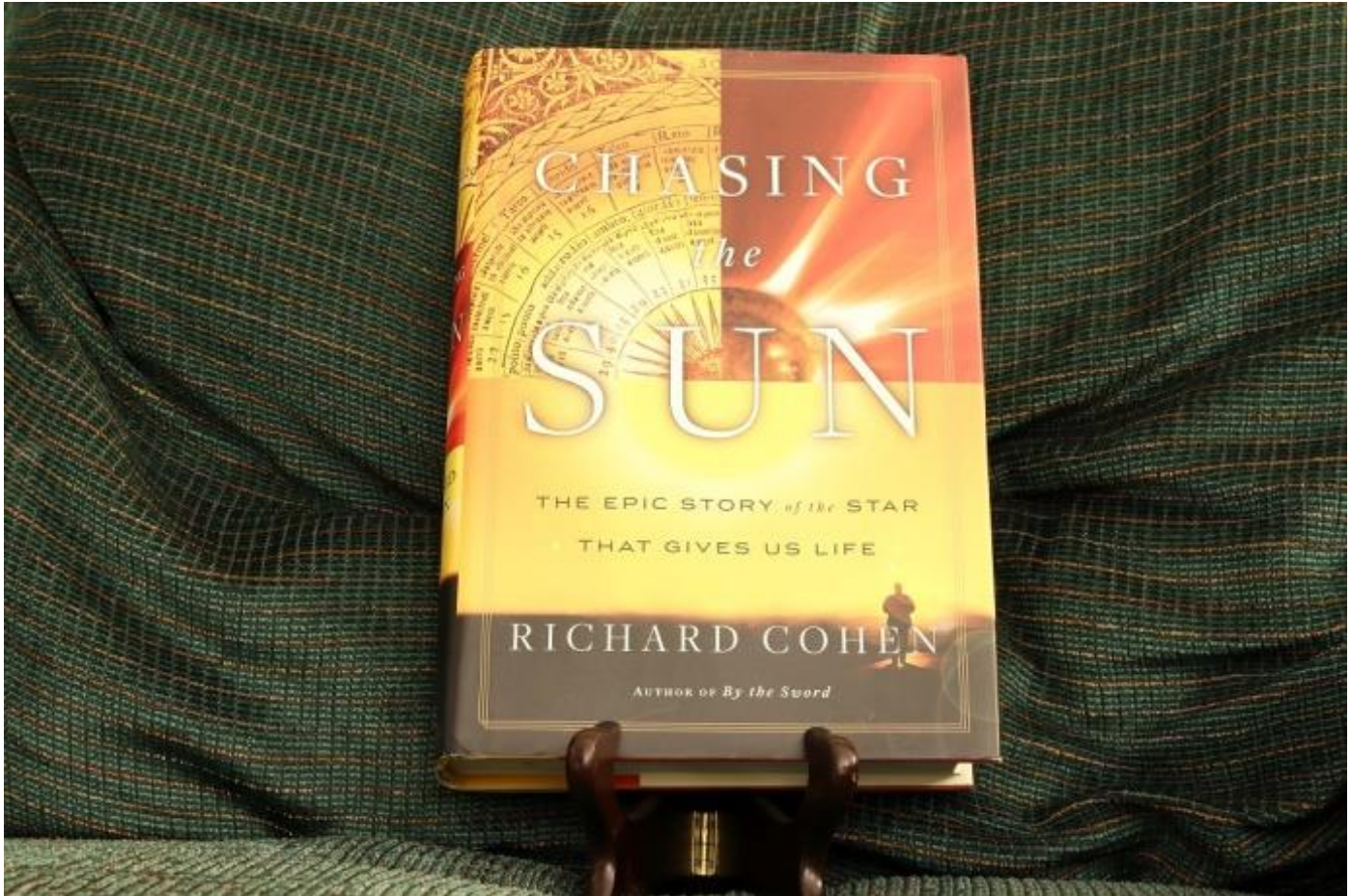
The month started with Randy Enkin giving a presentation titled: "Galileo's Observations and Interpretation of the phases of Venus". For the second week's Astro Cafe, John McDonald gave a talk about the life of Christian Doppler and the following week was Victoria Day, so there was no Astro Café or much of any Victoria Day celebrations at all for that matter. For the last Monday, Michel

Michaud did a presentation on his ongoing double star project in the Pleiades, which has unfortunately been interrupted by the problems we've been having, over the last year, with our new Ritchey-Chretien telescope at the Victoria Centre Observatory.

Bruce Lane

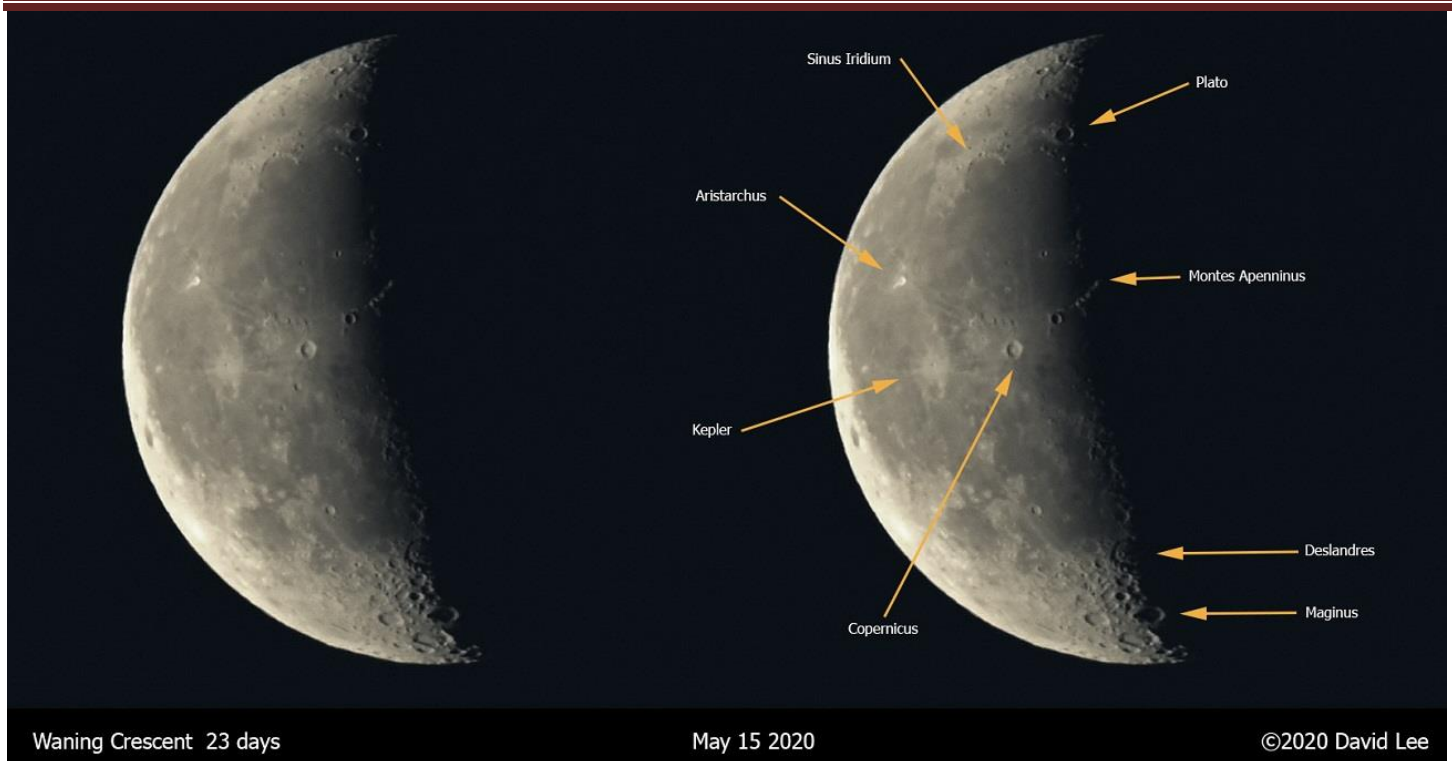
From the Library

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 Diane Bell, our RASC Victoria Librarian. 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. I've been doing book reviews of the contents of our Centre's library, but until the resumption of our monthly meetings, I'll 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 *Chasing the Sun: The Epic Story of the Star That Gives Us Life*, by Richard Cohen. Chasing the Sun is a large volume, so stuffed with history, science, and anecdotes about the Sun that it sometimes takes on the qualities of a solar *Farmer's Almanac*. It's an ambitious work that covers a lot of topics that themselves could fill an entire book. I did find a few historical inaccuracies, when I read it, especially when the author was straying off topic. The most memorable one for me was crediting the Sumerians with the invention of the wheeled cart. It was introduced to them by the Proto Indo-Europeans, along with the chariot. You can find a lot of older sources that say it was the Sumerians, just like you can find a lot of older sources that say that Egypt was the first human civilization, or even older sources that say that on Mars there are canals built by alien civilizations. Overall, *Chasing the Sun* is an interesting read and it's available from your local bookstore.

Bruce Lane



Hill and Dale (Observing on the Island)

Cancellation of our weekly scheduled observing sessions at the Victoria Centre Observatory continues, due to the pandemic. May has had a few less splashy astronomical events, but still more than a few clear evenings for those with their own astronomy gear to take advantage of their spare time. As the nights grow shorter, things will slow down for amateur astronomers interested in deep space, with the amount of actual darkness measured in mere minutes, instead of hours. The Moon and planets are still available (*like the image above by David Lee*) and those of you who do solar astronomy have some extra observing time on your hands.

The ailing 16" Ritchey-Chretien telescope at the VCO has finally been packed up and shipped back to the vendor for repairs. We wish it a safe journey and hope for a quick return from the workshop bench. Other than getting permission for dealing with our RCT shipping project, we still don't have permission to access our observatory, due to it being on National Research Council property. That and we aren't even sure that there's a good way to safely proceed with observing sessions with shared optics.

A reminder that although the VCO belongs to and is for the use of the members of the RASC Victoria Centre, with both weekly scheduled and unscheduled sessions run by our MiCs (Members in Charge). 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. If you're a member of RASC Victoria and want to get on the list, just contact Chris Purse (Membership Coordinator) membership@rasc.victoria.ca and we'll see you up there on the Hill at some point in the future, when our access to the observatory on National Research Council property resumes.

Bruce Lane



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Venus crescent, taken over period of Apr18-May 25, 2020, by John McDonald

Astronomical Term of the Month: Solar Cycle

The *solar cycle* is the eleven year cycle of the Sun's magnetic field. This cycle contains both a solar minimum and a maximum, in reference to the amount of sunspot activity. The discovery of the solar cycle is often credited to Heinrich Schwabe's published findings in 1843, after nearly two decades of solar observations. However, Danish astronomer, Christian Horrebow wrote about it in 1775. Swiss astronomer, Rudolf Wolf used observational data going back to 1610, along with his own, to advance the understanding of the periodic fluctuations of sunspot activity.

After spending centuries observing the Sun to figure out the source of the solar cycle, last year an answer was found by a team of German researchers from HZDR (Helmholtz-Zentrum Dresden-Rossendorf) by looking in the opposite direction. An eleven year cycle of Jupiter, Venus, and Earth lining up was discovered to be in perfect sync to the solar cycle. Similar to how the Moon can have an influence on the Earth, the three planets lined up were able to affect the magnetic field of the Sun.

We're currently in the solar minimum of the cycle, which is less than enjoyable for those of you with hydrogen alpha filtered, solar telescopes or solar filters for looking at the Sun. Being in a solar minimum doesn't necessarily mean that there will be no sunspots on a given day, but it certainly does tend to make for a quiet disc to look at through your telescope.

Bruce Lane

In Closing



We often use June to end the face to face administrative year for RASC Victoria. It's when we hold our last monthly meeting, last council meeting, and last Astro Cafe before resuming things in September. For observers and astrophotographers as we rapidly move towards the Summer Solstice on June 20th, unless you either have a dedicated solar telescope or solar filter, the shortened nights restrict how much time you can work under more distant stars. At the moment, we're in a solar minimum, so that also means a minimum of exciting features to observe on the surface of the Sun. It's also when we start to get serious about planning ahead for the upcoming star party season. Due to Covid-19, all that has been disrupted. It's been months since our last monthly meeting, Astro Café is

being done online via Zoom, and almost every star party and public outreach event has been cancelled. That doesn't mean you can't still go outside, while we enjoy the longest days of the year. Whether you're out gardening in the yard, hiking the trails, or out in your boat it's a good time of the year to be living on the West Coast. Just try to stay off social media websites as much as possible. There's only so much doomscrolling a person can take and still stay sane.

As we close out our non-eclipse, solar themed issue of *SkyNews* (*Ed. it's shorter because we're in the solar minimum*) it's time to soak up the sunshine and bat aside the mosquitoes, during our reduced evening telescope sessions. Usually, June would also mark the beginning of the break for the *SkyNews* editor's duties, but I'll be continuing to publish through the summer. It's important for RASCals to each do our part to stem the lack of connectivity, resulting from social distancing and the cancelation of so many of our activities, and that means more *SkyNews* issues. The last time someone published a summer issue was 2011 and before that in 2008. I haven't yet decided whether I'll be doing a single summer issue, as was the case in previous summer editions, or just continue doing monthly issues. Certainly the lack of Centre activities might make it a lot hard to do the latter. Continued content submissions by the Centre membership will make it a lot easier going forward. This is when I drop that dreaded phrase, seen on many a school yearbook, usually after someone has pleaded, begged, and possibly wept for you to write anything but that.

Have a nice summer,

Bruce Lane: SkyNews Editor

Photography Credits

Cover: Victoria Centre RASCals on the way to the Vancouver GA, 2003, photographer unknown

Page 2: Crop of Bruce Lane (SkyNews Editor) at 2013 RASCal Star Party in Metchosin, by Chris Gainor

Page 3: Crop of Reg Dunkley (RASC Victoria President) at 2018 AGM, by Joe Carr

Page 4: Photograph and Design of Astro Cafe Mug, by Joe Carr

Page 5: Posed Book, "Chasing the Sun", taken in Editor's home on May 11th, 2020, by Bruce Lane

Page 6: Waning Crescent 23 days, May 15, 2020, by David Lee. Taken using Nikon Z6 on Televue 76. Post production with Registax 6 and Adobe Photoshop CC.

Page 7: Venus crescent, taken over period of Apr18-May 25th, 2020, by John McDonald. Taken using ZWO ASI120MM-s camera, with 2.5x Barlow, on Williams Optics 105mm; with an effective focal length of 1785mm. Red and IR filters used for images taken at lower elevations. Best 15-20% of 1000 to 2000 video frames taken at over 100fps with SharpCap and processed in Astrostakkert, ACR and Photoshop.

Page 8: Cuckoo Maran in rose garden, by Bruce Lane; Apr 12, 2020

Call for Article and Photo Submissions for July Issue

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

RASC Victoria Centre Council 2020

Director Positions	Name	Email
PastPresident	Chris Purse	pastpres@victoria.rasc.ca
President	Reg Dunkley	president@victoria.rasc.ca
1 st Vice President	<i>It's never been easier!</i>	vp@victoria.rasc.ca
2 nd Vice President	Marjie Welchframe	vp2@victoria.rasc.ca
Treasurer	Deborah Crawford	treasurer@victoria.rasc.ca
Secretary	Barbara Lane	secretary@victoria.rasc.ca
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NRC Liaison	James di Francesco	
FDAO Liaison	Laurie Roche	
UVic Liaison	Alex Schmid	
Pearson College Liaison	Bill Weir	
Members at Large	Jim Hesser	David Lee John McDonald
	Dan Posey	Li-Ann Skibo