

# Nova Notes

The Newsletter of the Halifax Centre of the Royal Astronomical Society of Canada

PO Box 31011, Halifax, Nova Scotia, Canada B3K 5T9 [www.halifax.rasc.ca](http://www.halifax.rasc.ca) [halifax@rasc.ca](mailto:halifax@rasc.ca)



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**PLUS ALL YOUR FAVOURITE REGULAR FEATURES!**

**NOV / DEC 2023**

**VOL 54 NO 5**



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### Cover Photos:

#### Main Photo:

M42, 2023  
8 December, 2023  
by **Blair MacDonald**

#### Thumbnail

St. Croix Observatory  
drawing by  
**Mary Lou Whitehorne**

**Note: All photos and original works in this edition are the copyrighted property of the photographers, writers and artists. Permission to use any of their photos for other purposes must be obtained from the photographer.**

## Have something to share?

Articles, reviews,  
photos and sketches  
welcome!

email:

[novanoteseditor@halifax.rasc.ca](mailto:novanoteseditor@halifax.rasc.ca)

# From the Editor

As 2023 comes to a close, we look back on the year. So much accomplished in the centre highlighted by the annual reports included in this edition.

While the "seeing" may not have been the best this year (thanks to clouds, storms, fires and floods,) and many events cancelled for the same reason, there was still a lot to be accomplished.

Many of us gathered at SCO this summer for some social time, some helped "refresh" SCO back in the Fall, and many of us continued to share our passions through astrophotos, outreach and lots of other personal projects.

2024 is just around the corner, and will bring the "Great American Eclipse" and many other opportunities to gather and celebrate the wonders of the sky.

I look forward to seeing what the year ahead brings us, and I look forward to sharing those moments with my fellow RASCals.

Cheers to the new year, new opportunities and wishes for clear skies!

With continued gratitude,

Lisa



Sometimes you just need to embrace the clouds. Moments don't always go as planned, such as this photo I took back in November - I had planned a composite photo of the Moon and Venus rising in relation to the Cape May (NJ) Lighthouse. Unfortunately, the clouds did not clear until just before sunrise. Yet still, there was beauty in the moment.

## Upcoming Meeting Dates

- January 6, 2024
- February 3, 2024
- March 2, 2024
- April (cancelled to allow for those traveling for the eclipse.)
- May 4, 2024
- June 1, 2024
- December 2 (Members Meeting + AGM)

We are now hosting hybrid live/Zoom Members' Meetings. Halifax Centre meetings are usually held on the first Saturday of the month, except for July and August.

Come join us in-person in Room AT101 at Saint Mary's University or by pre-registering for the meeting on Zoom.

The meeting are recorded and become accessible shortly thereafter on our Halifax RASC YouTube channel. For information about the meeting and how to register for the Zoom session, please visit <https://halifax.rasc.ca/index.php/activities/rasc-events>

For past meeting replays, visit our YouTube Channel <https://www.youtube.com/c/raschalifax>



## St. Croix Observatory

Part of your membership in the Halifax RASC includes access to our observatory, located in the community of St. Croix, NS. The site has expanded over the last few years and includes a roll-off roof observatory with electrical outlets, a warm-room, and toilet facilities. We welcome you to bring your own equipment or to use the Centre's 400-mm Dobsonian telescope, 100-mm binoculars, and the recently acquired SCT and gear for astro-imaging.

Enjoy dark pristine skies far away from city lights and the company of like-minded observers searching out those faint "fuzzies" in the night. Most clear Moon-free nights, you will find our keen observers out there! Announcements of members visiting SCO are made on the Centre's Discussion List. If you are not a key holder and would like to become one or need more information, please contact the SCO Manager, John Liddard, at [scomanager@halifax.rasc.ca](mailto:scomanager@halifax.rasc.ca).

### SCO is Open!

Go to our website (<https://halifax.rasc.ca>) for the latest SCO usage guidelines and conditions.



St. Croix Observatory  
drawing by Mary Lou Whitehorne

**NOTE:** As of Fall 2023, the building has lights again! (Thanks to Tony McGrath and Peter Hurley, the lights have been connected to 110v AC power.)

## Halifax RASC Board of Directors, 2023

Elected	
President	John Nangreaves
Vice-President	Patrick Kelly
Secretary	Peter Hurley
Treasurer	Gregg Dill
Director	Judy Black
Director	Gregg Dill
Director	Matthew Dyer
Director	David Hoskin
Director	Tony McGrath
Director	Kathy Walker
Appointed	
Honorary President	Mary Lou Whitehorne
Auditor (2022-2023)	Dave Chapman (appointed Nov. 28, 2023)
Communications Committee, Chair	Patrick Kelly
Dark-Sky Preserve Committee, Co-Chair	Peter Hurley
Dark-Sky Preserve Committee, Co-Chair	Tony Schellinck
Governance Committee, Chair	Judy Black
Librarian	Jerry Black
National Council Representative	Judy Black
Nominating Committee, Chair	Peter Hurley
Nova Notes, Editor	Lisa Ann Fanning
Nova Notes, Copy Editor	John McPhee
Observing / EPO Chair	David Hoskin
St. Croix Observatory, Manager	John Liddard

## SAVE THE DATES FOR 2024!



**Dark-Sky Weekend**  
August 2-4, 2024

**New Moon August 4, 2024**

**Nova East Star Party**  
August 9-11, 2024





# Halifax Centre's Shining Stars

2023 has seen three of our very worthy members receive RASC Awards. Here are excerpts from their nominations.

## RASC Service Awards (established in 1959)

The RASC Service Award is a major award of the Society given to a member in recognition of outstanding service, rendered over an extended period of time, where such service has had a major impact on the work of the Society and/or of a Centre of the Society. The following nominations were made by David Chapman and the RASC Halifax Centre Board of Directors. These two recipients join 11 others from Halifax Centre who have received this award since 1964 (<http://halifax.rasc.ca/index.php/49-rasc-awards?highlight=WyJhd2FyZHMlXQ==>). Acknowledgement of their receipt of the award was given by Judy Black and Dave Chapman at the June 3, 2023 members' meeting (<https://www.youtube.com/watch?v=7DjQQ3aE6K8>)

**Quinn Smith**, who joined in 2004 and now resides in the UK, served as *Nova Notes* editor for nine years (2007-2015), led the *Year of Astronomy* campaign in 2009, was one of two volunteers who initiated the Kejimikujik National Park and National Historic Site to become a Dark Sky Preserve (2010) and represented RASC Halifax with Parks Canada for 12 years,



Quinn Smith with his award

acted as registrar for the Centre's Nova East Star Party for four years and chaired the organizing committee for two years, chaired the successful 2015 RASC General Assembly held in Halifax, and was always at the forefront of the RASC representation at the annual tradeshow sponsored by Saltscapes. He was an active speaker at numerous outreach events at libraries, the Halifax Planetarium and several other venues.

Quinn is a passionate amateur astronomer whose hard work has contributed much to the success of the RASC Halifax Centre. As a small tech business owner, he has superb organizational and managerial skills, along with an engaging personality in representational matters with outside organizations such as Parks Canada, local universities, and exhibitions.

**Chris Young**, who joined in 2001, served as the Centre's Secretary from 2009-2015, served on the Nova East Star Party organizing committee (2008-present) and was the Chair this year, and arranged for a special visit by Elder Murdena Marshal of Eskasoni to the Mi'kmaw night sky story "Muin and the Seven Bird Hunters." He began his outreach activities in 2009 during the International Year of Astronomy, gave presentations at the Kejimikujik Dark Sky Weekend for the past nine years, and has given mini-talks on cultural astronomy to our Centre's monthly meetings.

Chris Young is one of those stalwart members who do not seek the limelight but is always ready to jump in to lend a hand without being asked. He has a level head and a calming manner, always helpful in problem-solving and providing guidance. Countless volunteers have credited Chris with keeping them "sane" during stressful episodes such as running GAs and other complex events—one individual called Chris his "guardian angel." One episode is telling:

when a former elderly Centre President became too sick to drive himself to meetings, Chris arranged to pick him up, bring him to meetings, and take him home afterwards—no one asked Chris to do that, he just saw the need and quietly took care of it. Later, before that gentleman's death, he requested to look once more at the dark night sky from the Centre's Saint Croix Observatory, and Chris took care of that as well. Chris carefully managed the disposition of the eventual donation of astronomical equipment to the Centre.



RASC Service Award (L) and the 2023 President's Award (R)



Centre stars, Chris Young (L) and Judy Black (R) pose with their respective awards. Congratulations to all the winners on their much-deserved honours.

## RASC President's Award (established in 2008)

This award is to be given at the President's discretion, usually once a year, to a member who has made an important contribution to the Society, and to be presented by the President either at the General Assembly or during a visit by the President to the home Centre of the recipient.

**Judy Black**, who joined in 2014, has held the role of a director (2023), Secretary (2016-2019) and President (2020-2023) of our Centre, Chair of the Nova East Star Party planning committee (2017-2022) and most recently as the Centre's representative to the National Council (2021-present). In March 2021, she was elected Co-Chair of the National Council and was elected Chair in June 2022. It was in this capacity that she received this award via a recorded message at the May 13, 2023 members' meeting (<https://www.youtube.com/watch?v=3zdzBPHPw1Y>).

Charles Ennis as the RASC President stated in his nomination, "Judy Black has been working tirelessly as Chair of the National Council to turn it into a functioning entity, focussing on communication, cooperation, and transparency. She's been on the phone with the President just about every day working on this, running productive National Council meetings and mentoring the process online through the chat groups and email. We've now reached a point where we are seeing results. Therefore, I have nominated Judy for the President's Award for 2023 to recognize this important contribution to the Society."

Congratulations to all recipients!



# SCO Gets A Refresh

Back in September, 2023, the St. Croix Observatory got a little “refresh.” Thank you volunteers for all you do! A fresh coat of paint, and it’s looking like new!

Additionally, as of Fall 2023, the building has lights again!

Thanks to Tony McGrath and Peter Hurley, the lights have been connected to 110v AC power.



Dave Chapman is ready for the task!  
Photo courtesy of David Chapman



The scene from SCO - in all its autumn glory!  
Photo courtesy of David Chapman



Tony McGrath giving a new “coat” to SCO  
Photo by David Chapman

# THANK YOU!

# Moonscapes: Mare Serenitatis

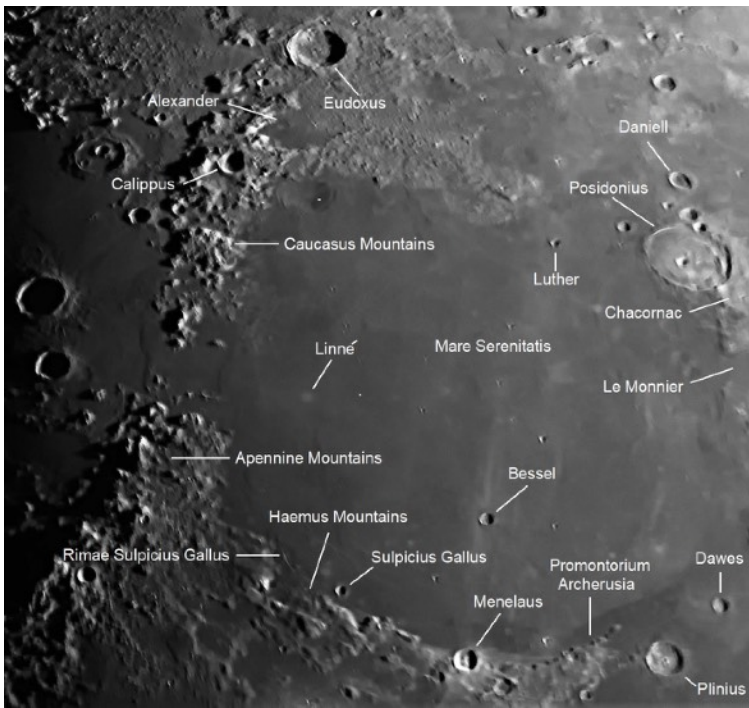
By David Hoskin



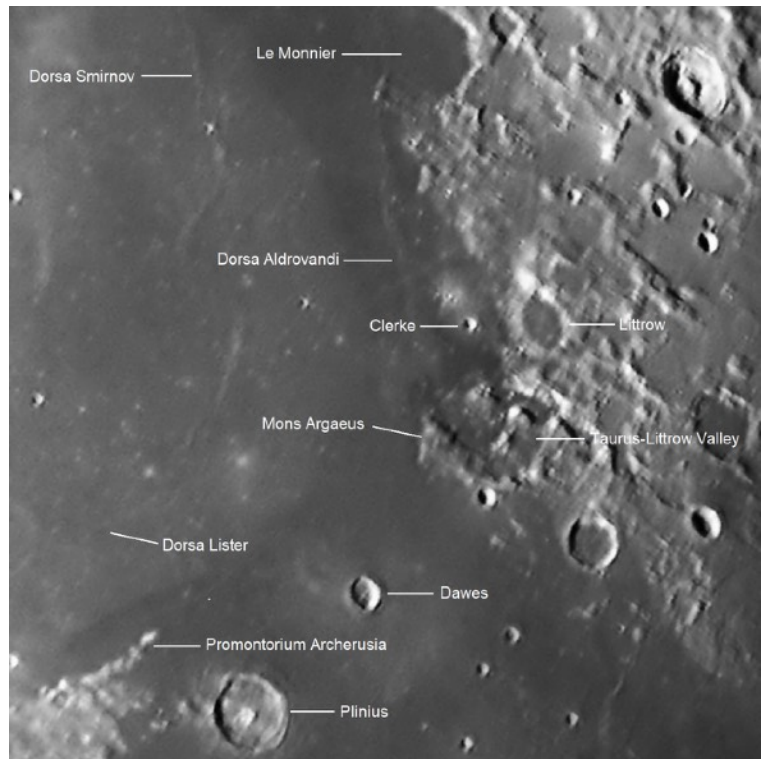
Lunar “seas” (maria) and their associated craters provide wonderful targets for both telescope eyepiece observation and photography. In addition, these lunar features are an important part of the RASC Explore the Universe program. Maria (singular is mare) are large, dark features formed by ancient lava flows and are easily seen with the unaided eye. Indeed, maria cover a large part of the Moon’s near side.

Mare Serenitatis (Sea of Serenity – the circled area in the above image) covers 353,400 square kilometres with a diameter of 674 kilometres. An asteroid impact between 3.8 and 3.9 billion years ago formed Serenitatis Basin, which was subsequently flooded with basaltic lava during a period of lunar volcanism. The centre of Mare Serenitatis contains a mascon (mass concentration/gravitational high), which was identified by Lunar Orbiter spacecraft.

The close-up image of Mare Serenitatis shown here was captured on day 8 of the lunar cycle. The northern border of Mare Serenitatis consists of light-coloured uplands that end where the mare joins with Lacus Somniorum to the north. The western edge of Mare Serenitatis connects to Mare Imbrium and is bounded by the spine of the Caucasus Mountains to the northwest and the foothills of the Apennine Mountains to the southwest. The Haemus Mountains form the southern border of Mare Serenitatis, which ends at the jagged cape of Promontorium Archerusia and is connected to Mare Tranquillitatis to the southeast by a wide strait.

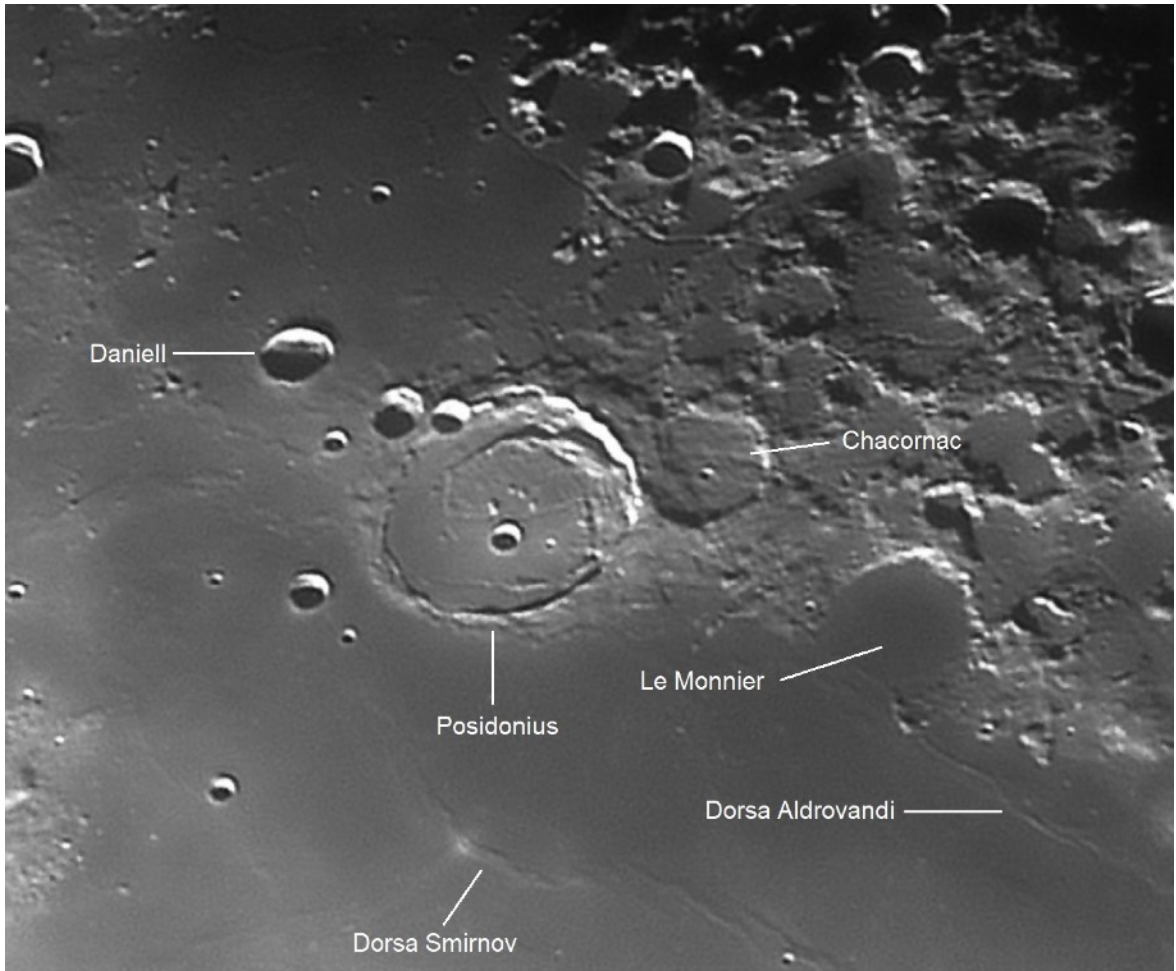


The eastern edge of Mare Serenitatis begins at the 2560-metre-high mountainous massif, Mons Argaeus, and continues northward as light-coloured highlands broken up by patches of lowland lava. Taurus-Littrow Valley near Mons Argaeus was the landing site for Apollo 17. The floor of Mare Serenitatis contains the wrinkle ridges Dorsa Smirnov, Dorsa Aldrovandi, and Dorsa Lister. These low, sinuous ridges are tectonic features that formed after the lava flow cooled and solidified. The ridge complex comprising Dorsa Smirnov and Dorsa Lister was once known as the “Serpentine Ridge” due to its snake-like appearance. Another interesting feature of Mare Serenitatis is the bright ejecta ray located near the 17-kilometre-widet Bessel crater. The ejecta originates from Tycho crater, which is about 2,000 kilometres to the south-southwest!





The most striking feature of Mare Serenitatis is the 95-kilometre-wide crater Posidonius. At the centre of the crater's floor is a smaller crater, Posidonius A, which is surrounded by rilles, ridges, and hills. A chain of small craters extends from the crater wall of Posidonius. The floor of nearby Chacornac crater is marked by several rilles. To the south of Posidonius one comes to the lava-flooded crater Le Monnier, which resembles a smaller version of Sinus Iridum in neighbouring Mare Imbrium. The remnants of the flooded western ramparts of Le Monnier can be discerned as a low ridge. Linné is a small (2.4-kilometres-wide) but interesting crater with the shape of a flattened inverted cone that is in the eastern region of Mare Serenitatis. The patch of bright ejecta that surrounds Linné is easily seen with binoculars.



Although the major features of Mare Serenitatis can be enjoyed with binoculars, a telescope with an aperture of at least 150 millimetres is recommended for viewing finer features such as rilles and individual craters.

### Sources

A Guide to the Moon's Mare Serenitatis by Pete Lawrence, BBC Sky at Night Magazine

Geologic Processes on the Moon/Cratering on the Moon, Lunarpedia.org

Mare Serenitatis and Mons Argaeus - Wikipedia, en.wikipedia.org

Moon Observer's Guide by Peter Grego, Firefly Books Limited

# Food for the Soul: The Poetry of Paul Heath

It stands tall before us  
Its peak, a glimmering shard of light,  
That beckons from the darkness.

From the valley's depths  
Lights bespeckle the sky,  
As wonder fills the Questing Soul.

With focused glass  
We begin our climb  
Seeking wonders, with a Questing mind.

## Mountain

By Paul Heath

First steps to terraces wide  
We pause, with widened eyes  
To learn the majesty of the skies

In confidence, we climb again  
Questing minds, on high terraces us have joined,  
To wonders of the firmament are shown.

Then to the summit we are drawn,  
Ascending, to a vista stretched beyond our mind,  
With arms outstretched, the widened glass we grasp,  
Then within our minds, a piece  
The glimmering shard of light, hold fast.

## Illusion

A bright glow precedes, then  
Conjured, it rises  
Swelling up into the sky.  
Wide Eyed, it peers above  
Its self-illuminated line,  
Then in a rush  
Pulls itself fully into the night.

A glorious orb of sunset hue  
Floats so large within a star laden sky,  
Below, enhanced by vistas grand  
Wonder and Awe spreads, with sudden sights surprise.

Yet,  
Does not his grin sit askew?  
Is there a secret, known, but only to a few?  
Perhaps this vision is not fully true.

Then rising high,  
He dons a silver lined, gleaming hue  
His wide shining smile,  
Shifts shadows down upon the ground.

At times we marvel, his swift running of the skies,  
As quick from broken cloud to broken cloud  
He seeks his race to hide,  
But for a silvered, shining halo, his swift run trail unveiled.

Yet,  
Do we trust a smiling Rabbit  
As he bows to all below,  
Does he hold the secret, we all should seek to know?

As night surrenders to the Sun,  
His visage swells again to Wonder,  
And with his grin once more askew,  
He drops rapidly from view.  
There comes a time,  
When the questions need is asked,  
A hand outstretched, its smallest digit held  
Fast upon Wonders vision, till  
Illusions mask unveiled,  
With Eyes assumption held to task,  
Wonders secret is revealed.

Yet,  
His grin askew, and Rabbits smiling bow,  
A secret deep, seems still to hold somehow.

For those of us, who  
Hope for Wonders that enthral,  
Let not Knowledge, of Eyes true sight,  
Keep you from the night.

For when his grins askew,  
And sunset orbs swell anew,  
Prepare yourself to dash  
Along Rabbits silvered, glowing half hidden path,  
Let Illusion, fill up your Soul, with Joy.

# Member News

## Member Tim Doucette wins Pitch Competition



November, 2023 Congratulations to **Timothy Doucette** of Deep Sky Eye Observatory on winning the Ignite Atlantic TIANS NS Rural Tourism Innovation Pitch Competition. The prize is \$5000 towards building a Planetarium at Deep Sky Eye.

Read more here: <https://tourismns.ca/news/intouch-blog/rural-nova-scotia-tourism-innovation-pitch-winners>

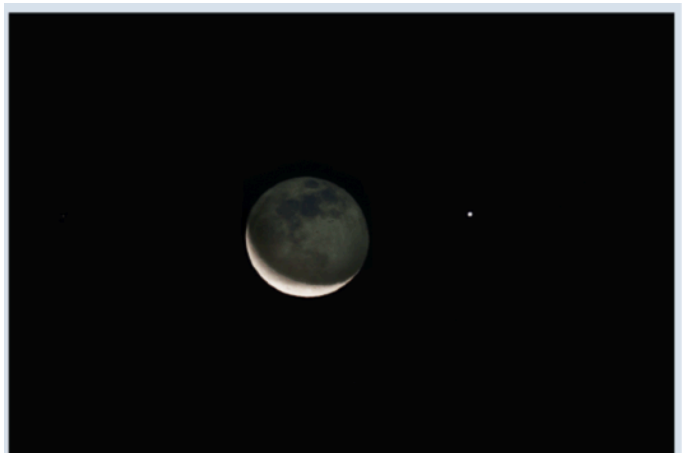
Photo via [saltwire.com](http://saltwire.com)

## Hoskin featured in EarthSky News

November 11, 2023

**David Hoskin** has once again been featured in EarthSky News. His photo featured the Moon and Venus.

Hoskin is a frequent contributor to EarthSky and is also frequently featured in their articles and social media as well as their weekly highlight videos featured on YouTube.



**Thursday's moon and Venus, from Canada**

[View at EarthSky Community Photos.](#) | Did you see the moon and Venus on Thursday morning? What an amazing sight ... the sky's 2 brightest nighttime objects were blazing so close together! [David Hoskin](#) of Halifax, Nova Scotia, Canada, was one of the many who captured them. He wrote: "This image shows the beautiful [waning crescent](#) moon with prominent [earthshine](#) very close to brilliant Venus. It was well worth rising before sunrise to see this stunning sight!" It was. Thank you, David! [Click in for a video and lots more Venus-moon photos. here.](#)



# Member News:

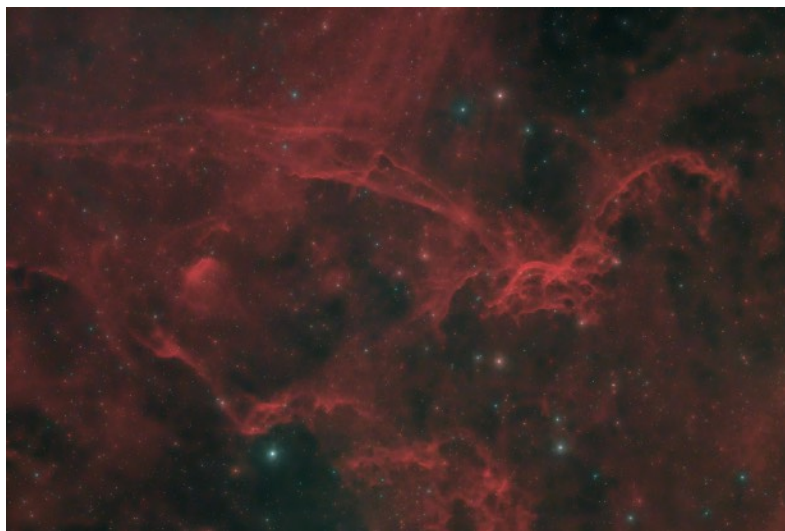
## Blair MacDonald's Discovery

You may recall **Blair MacDonald's** stunning photo of the Flying Dragon Nebula composed of SH2-113 and SH2-114 from our September/ October edition. Well, here's a little update:

Blair writes: "Until recently, this nebular complex was rarely imaged due to its faintness. Modern equipment makes even faint targets like this relatively easy to image. SH2-114, the Flying Dragon (center right in the image) has the filamentary structure similar to a supernova remnant, but there is no evidence of a supernova in the area.

This may be a bit of a discovery image as the bluish OIII bubble in the upper left quadrant doesn't seem to be in any catalogs that I have been able to access. The bubble is centered on RA 21:22:46 declination +38:03:37 and is about a half degree across. I have had some difficulty in determining if this is a real object or a processing artifact. All dark, bias, flat and light frames were checked to make sure that image calibration did not introduce any errors and I have given the data to several other astro-imagers and the bubble showed up in their processing of the data as well.

A friend and fellow astrophotographer, Jason Dain, took some narrow band data for me and the starless versions of his H-alpha and OIII data are shown on the next page. The OIII data, faintly shows the object in the center of the picture while the H-alpha image shows no trace of it. The fully processed OIII frame is shown with the bubble clearly visible, even in the crowded star field."



**Blair MacDonald's** original image of Flying Dragon Nebula RA 21:21:14  
Dec +38:02:55 - 22 August, 2023 - Marion Bridge, Nova Scotia

Exposure 4.5 hours (19 X 15 minutes)

Conditions Bortle 4 skies.

Gain 100

Camera Zwo ASI2600MC-Pro

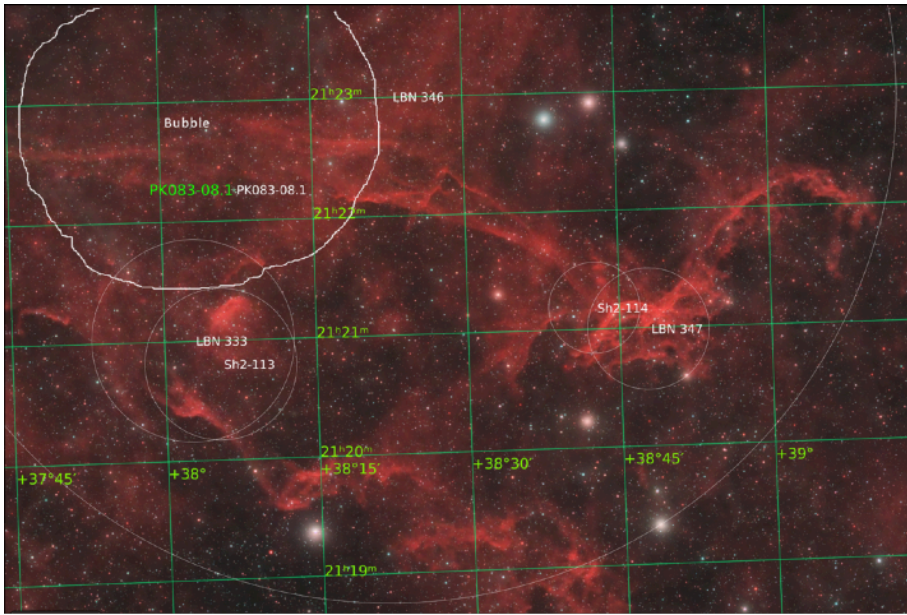
Optics Prime focus of a SkyWatcher Esprit 120 f/7 APO refractor with a focal length of 840 mm

Filter Optolong L-eNhanche

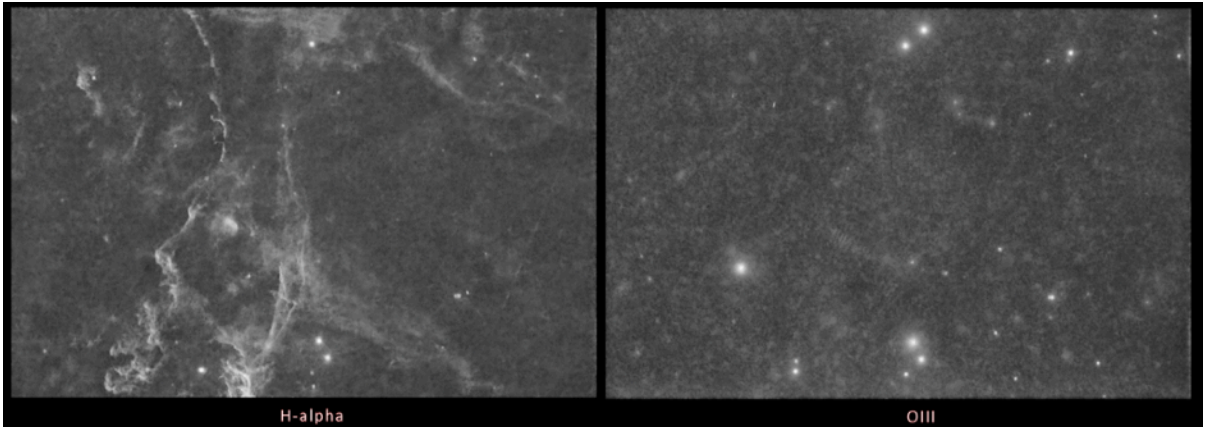
Processing This image was captured using Sequence Generator Pro. Noise reduced with Noise Exterminator, sharpened with Blur Exterminator. Arcsinh stretched using Images Plus. This was followed by my typical split star processing.

See next page for annotated, H-alpha and OIII images.

# Flying Dragon (con't)



Flying Dragon-annotated image  
Photo by **Blair MacDonald**



Above: H alpha (L) and OIII (R) images

The fully processed OIII frame to the right “shows the bubble clearly visible, even in the crowded star field.”

Images by **Jason Dain**



Enjoy more of Blair’s work here: <http://www.nightanddayastrophotography.com/>

# Members' Universe

## Jason Dain captures Gemenid streak across the sky



**Jason Dain** caught this Gemenid meteor streaking over the lake. Halifax, NS - December 13, 2023.

This incredible photo was also picked up by EarthSky and featured in the December 15th edition of EarthSky News.



# Members' Universe: David Hoskin's Universe



Composite photos of the Full Hunter's Moon and Jupiter with Galilean moons  
8 Oct 2023 Image by **David Hoskin**



Moon and Venus conjunction on 9 Nov 2023  
Photo by **David Hoskin**

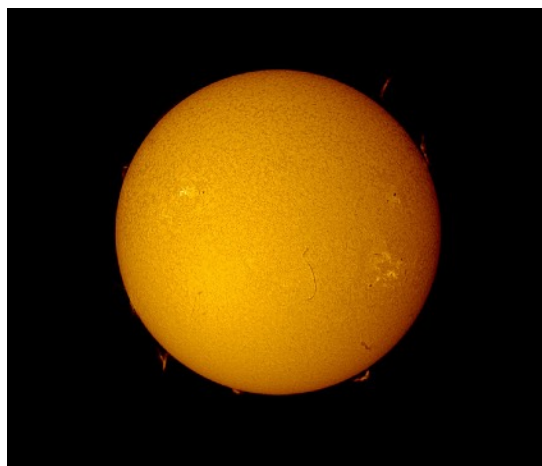


Waning gibbous Moon on 29 Nov 2023  
Photo by **David Hoskin**

M103 and other open clusters in  
Cassiopeia November 2023  
Photo by **David Hoskin**



# Members' Universe: David Hoskin's Universe



Hydrogen alpha image of the Sun  
on 8 Dec 2023  
Photo by **David Hoskin**



White light image of sunspot groups  
AR3510, AR3508, and AR3511  
December 2023  
Photo by **David Hoskin**



Open star clusters NGC1528 and  
NGC1545, sometimes called the  
M&M Double cluster in the  
constellation Perseus the Hero.  
December 2023  
Photo by **David Hoskin**

The asteroid Vesta near the Monkey  
Head Nebula (NGC 2174). Vesta has  
a diameter of 530 kilometres and is  
the brightest asteroid in the sky.  
December 2023  
Photo by **David Hoskin**



# PUZZLE CORNER – North & South

(See next page for clues)

## Astro Cross Words

By Judy Black

**Astro Cross Words** is a regular feature in *Nova Notes* since the Sept/Oct 2022 edition. The initial 5 were created by Laureen Burgoyne and Norman Scrimger, with subsequent puzzles developed by Judy Black to continue the challenge for our members. The *North & South* puzzle contains constellations (full spelling and abbreviations), nebula, stars and galaxies in both the Northern and Southern Hemispheres. Some astronomy terms are also included. Answers will be in the next edition of *Nova Notes*. Have fun!

1		2			3		4			5					6			7
8					9		10		11									
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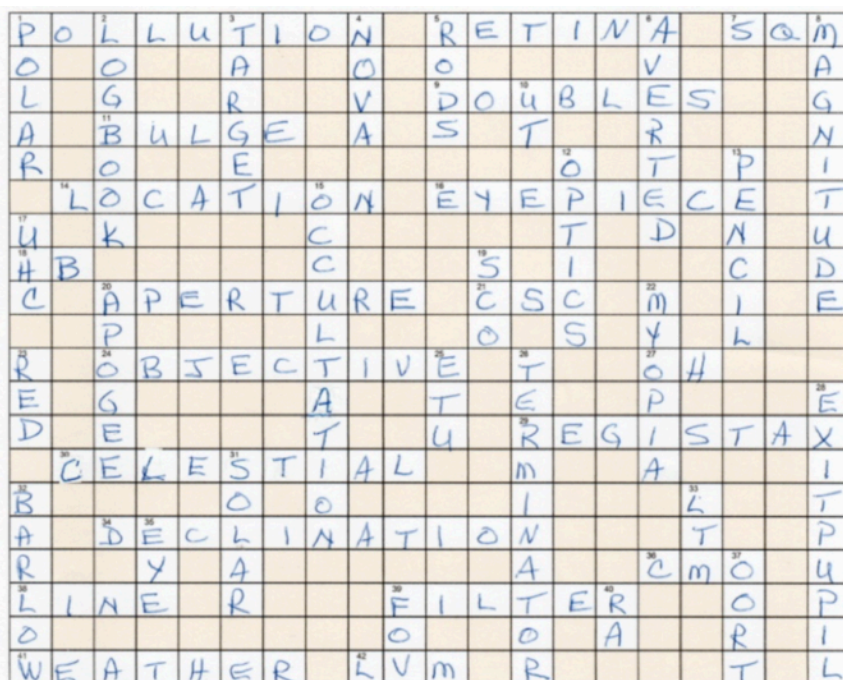
## **Across**

1. The sails of the ship Argo sailed by Jason and the Argonauts
3. The largest constellation in the sky located in the southern hemisphere; wouldn't want to be in the water with it!
5. First named by the Greeks, you will need a bow for this one.
8. The myth tells of a sacrificed animal impaled by a Centaur; we hear it howling in the wild.
9. Standard 3-letter abbreviation for the lizard constellation sometimes referred to as "Little Cassiopeia".
11. Located near Crux; we swat at it in the summer months.
12. Standard 3-letter abbreviation for the constellation representing a long-necked, four-legged, tall animal.
13. The Centaur aiming his bow and arrow at the heart of Scorpius; contains the asterism "the teapot".
16. The crosshairs at the focus of an eyepiece on a telescope that is used to measure star positions.
20. Heavy-billed black bird; Apollo's sacred bird.
22. A species of short-tailed cat.
23. Standard 3-letter abbreviation for the constellation name meaning "peacock"; Australians know it as "the Saucepan".
25. The two spiral galaxies in Coma Berenices with long tails.
28. Standard 3-letter abbreviation for the constellation meaning 'little foal'.
29. A small irregular dwarf galaxy near the Milky Way also called Nubecula Minor (acronym).
33. One of the genera of the 15 species of this large, long-legged and long-necked bird.
35. A planetary nebula in Lyra.
36. A dusty emission nebula in Auriga resembling aquatic larvae of a frog or toad.
39. Constellation represents a level, a set square, a rule, or carpenter's square.
41. Standard 3-letter abbreviation for the small constellation located above "18 Down".
42. Spiral galaxy in Coma Berenices formed by collision of M64 and another galaxy.
44. Two stars gravitationally bound and orbit their common centre of mass.
45. Name of brightest star in Pegasus.
46. The altar used by Zeus and other Greek gods to swear a vow to defeat the Titans.
47. Roman goddess, the patroness of bakers who ensured ovens were not hot enough to burn the corn or bread.
48. Informal name used for the spiral Triangulum Galaxy.

## **Down**

1. One of the smallest constellations and originally referred to as the flying fish.
2. The small animal chased by Orion or his hunting dogs.
3. Astronomical star catalogue devised by Henry Draper.
4. Standard 3-letter abbreviation for the constellation depicting a giant mythical flying reptile.
5. Shield named in honour of Polish King Jan III Sobieski in which M11 is found.
6. A 3-sided constellation containing a galaxy with the same name.
7. A long equatorial constellation showing no signs of waves, rapids, or tidal bore.
10. Standard 3-letter abbreviation for a small constellation named for a type of cup used to water down wine.
14. Named after a large-billed tropical American bird; contains the second-brightest globular cluster with a similar name.
15. The goddess of innocence who was renamed because she never married and remained pure.
17. Standard 3-letter abbreviation for a piece of astronomical equipment, such as the James Webb and Hubble.
18. The Lion.
19. Translation of name means *Table Mountain*; named by LaCaille to commemorate his hometown.
20. Cup of the god Apollo.
21. Constellation named for the magnetic compass used by navigators and should not be confused with Circinus.
24. The sails of Argo Navis.
26. Binary star in Boötes that marks the Herdsman's waistcloth.
27. Another name for the Owl Cluster due to its resemblance to the movie character.
30. The keel of Argo Navis containing the second brightest star Canopus.
31. Standard 3-letter abbreviation for the southern hemisphere version of this 3-sided figure.
32. Astronomical catalogue of deep-sky objects compiled by Dreyer in 1888.
33. Constellation representing Castor and Pollux in Greek mythology.
34. A noxious creature that creeps and hisses; might be related to water version cited in this puzzle.
37. Constellation name refers to the male golden big-horned sheep that rescued Phrixus in Greek mythology.
38. Planetary nebula in Ursa Major resembling the face of a bird that hunts primarily nocturnally.
40. Romans believed this constellation was associated with balanced seasons and equal length of day and night.
43. The southern version of this 4-start constellation is represented on the Australian flag.

## Answers to Last Edition's Puzzle



## November 4, 2023 RASC Halifax Centre Meeting:

(30 attendees)

To watch a replay of the meeting, please visit: <https://www.youtube.com/watch?v=Iw7NVt-327M> on the RASC Halifax YouTube Channel.

### **Welcome and Introductions - David Hoskin**

RASC Halifax Director, Observing / EPO Chair and program emcee David Hoskin welcomed everyone to the monthly meeting. The meeting kicked off with the Indigenous Land Acknowledgement and statement of inclusivity and diversity.

### **David Hoskin - Photo Montage**

David presented photographs and sketches from Centre members Jerry Black, Michael Boschat, David Chapman, Jason Dain, Tim Doucette, Lisa Ann Fanning, David Hoskin, Blair MacDonald, Tom MacIntyre and Mary Lou Whitehorne.

### **Paul Heath - Food for the Soul - *Mountain***

Paul presented his poem *Mountain* which can be read on page 10 of this edition of Nova Notes.

### **Member's Presentations:**

#### **David Hoskin:**

David Hoskin shared that the 2024 Night Sky Almanac by Nicole Mortillaro is available. He also shared the Player One Astronomy Mono Solar camera - they also have a wide range of astronomy cameras available for sale.

#### **David Chapman:**

David read from the book he co-authored with Cathy LeBlanc, *Mi'kmaw Moons: Through the Seasons*. He read the story that relates to the Wintertime or Chief Moon.

### **Special Presentation:**

#### **Hawaii! Stars in His Eyes! - Tim Doucette (Halifax Centre)**

Tim will give us a behind the scenes look at the filming of a documentary about Deep Sky Eye and how he ended up on the tallest volcano in the world, Mauna Kea, Hawaii, the challenges they faced being at high altitude, and how he got to control and image with the Canada France Hawaii Telescope (CFHT).

#### **David Hoskin (EPO/Observing Chair) - What's up for November, 2023**

David reviewed highlights of the November sky. A reminder that Standard Time will be applicable Nov. 5, 2023. He discussed the Sun, solar activity, the Moon, and targets needed to check off for Explore the Universe, and when they can be viewed. He also explained planetary positions, constellations, stars (including double and multiple) and deep sky objects. Also highlighted was the opportunity to see zodiacal light. Remember, each month, you can find David's presentations on the homepage at <http://halifax.rasc.ca>.

#### **News from the Board presented by Pat Kelly**

- Governance
  - Updated Policies:
    - The Board added a Donated Equipment Policy.
    - A New Member's Welcome Package has been created by Tony McGrath to be sent to new members.
- Astrophotography Contest deadline is Nov. 11. (See the Halifax Centre website for details)
- Nova Notes content deadline is Dec. 15. Submit any content to [novanoteseditor@halifax.rasc.ca](mailto:novanoteseditor@halifax.rasc.ca).

#### Upcoming Events:

##### Members' Meetings

- December 2 (Plus AGM) - there is an opening for Director on the Board if anyone is interested
- Upcoming Members' Meeting dates for 2024- Jan 6, Feb 3, March 2, April is cancelled (Close to the eclipse, many people may be traveling), May 4, June 1

## **December 2, 2023 RASC Halifax AGM + Centre Meeting:**

**(36 attendees)**

To watch a replay of the meeting, please visit: <https://www.youtube.com/watch?v=up9fVC4e5RQ> on the RASC Halifax YouTube Channel.

The following pages contain minutes from the 2023 RASC Halifax AGM and December Monthly RASC Halifax Centre meeting.



**Royal Astronomical Society of Canada - Halifax Centre**  
**Annual General Meeting (AGM)**  
**Saturday, December 2, 2023 – 1:00-1:45 PM**  
Via Zoom - Meeting ID 848 4938 0821

## **1. Welcome and Opening Remarks**

Judy Black welcomed the nineteen RASC Halifax Centre members meeting by Zoom (including 10 non-members) and the 16 attended in-person (including 3 non-members), stating Halifax Centre welcomes all with an interest in astronomy, without prejudice, and that the stars belong to everyone. Halifax Centre also respectfully acknowledges that we live and observe on the unceded territory of the Mi'kmaq People. Quorum was met.

The agenda for the afternoon was explained, i.e., the AGM was held first followed by the regularly scheduled member's meeting. The word "poll" in some of the items listed meant there were votes to be taken, such as approval of agenda, minutes, etc. Only members in good standing were allowed to vote.

### **a. Approval of 2023 Agenda**

#### ***231202AGM-Mot01:***

It was moved by Paul Heath and seconded by Bob Russell to approve the December 2, 2023, AGM agenda as circulated.  
CARRIED unanimously.

### **b. Approval of 2022 AGM Minutes**

The minutes of the December 3, 2022, AGM had been pre-circulated to members and were also available online for one year. No errors or omissions were noted.

#### ***231202AGM-Mot02:***

It was moved by Gregg Dill and seconded by Paul Heath to approve the minutes of the December 3, 2022 AGM as posted on the RASC Halifax Centre website.  
CARRIED unanimously.

### **c. Appointment of a New Auditor, 2023-2024 Fiscal Year**

At this point in time, there is no nominee for this position for the 2023-2024 fiscal year. Judy Black noted that any member with an accounting or bookkeeping experience could fill this role. If members know someone who could be approached or would like to volunteer themselves, please advise the Secretary or President. Given no one volunteered for the position at the AGM, the Board will go forward to seek out an Auditor who would be subsequently appointed but he Board.

## **2. Reports**

***(Note: Compiled reports will be included in the Nov/Dec 2023 edition of Nova Notes; missing reports will be in an issue in early 2024.)***

Judy Black noted the reports from the Board and the appointed positions had been pre-circulated November 28, 2023, and would not be read during this meeting. The exception is the Treasurer Report.

Judy Black noted the Auditor and Dark-Sky Weekend reports will not be presented at this meeting. Dave Chapman has accepted the appointment as the 2022-2023 Auditor as of 4 days ago. His report will be presented at a later date. The Webmaster report was missed in the listing due to the newness of the position and, given the changes in the past year, a report will also be presented at a later date.

### **a. Treasurer Report**

Gregg Dill addressed the Treasurer report. The ***Comparative Income Statement*** was presented with a few things highlighted.

#### **Income:**

- Membership fee income decreased \$638.81. There was a change in the Centre fees from \$23.00 to \$28.00 National neglected to increase the amount they charged; the 2022 increase showed up this year.
- Nova East income net was \$1,190.00.

#### **Expenses:**

- The value of depreciation and write-offs has doubled. Depreciation was 3% but it was the recommendation of last year's auditor that it be increased to 10%.
- Nova East expenses were due to reimbursements being made. Nova East was cancelled due to flooding at Smiley's Provincial Park.

Gregg noted there is a deficit showing of \$820.26. If 'Depreciation and Write-offs' (\$1056) is not included as an expense, there would be a surplus of \$502.00.

Dave Chapman noted there were expenses for Nova East door prizes and wondered where they were reflected. It was explained that expense claims had not been received.

The **Comparative Balance Statement** as of September 30, 2023.

#### **Assets:**

The Centre has \$10,175.49 in cash. Two GICs worth \$4000 each have the principal reinvested. Accounts receivable includes dues received by National in September and paid in October. Library was depreciated 10% from previous year's estimated worth. Observatory equipment relates to the telescopes and other related equipment which again depreciated 10%. The amount cited in *Miscellaneous Estimated* has been there several years; it has been written off.

#### **Liabilities:**

Accounts payable is doubled; the main reason is the \$1190 refunds for Nova East is included here.

#### **231202AGM-Mot03:**

It was moved by Gregg Dill and seconded by David Hoskin to approve the Financial Report as presented.  
CARRIED unanimously.

#### **b. Written Pre-Circulated Reports**

Judy Black asked if there were any questions regarding the remaining reports that had been circulated. None were received.

#### **231202AGM-Mot04**

It was moved by Bob Russell and seconded by Paul Heath to accept the 2023 Board of Directors and Committee reports as pre-circulated.  
CARRIED unanimously.

### **3. Call for Nominations and Election of 2024 Board of Directors**

Judy Black, member of the Nomination Committee, presented the nomination for the Board of Directors on Peter Hurley's behalf. The slate of nominees for the 2024 Board of Directors was then presented as follows:

#### Executive Committee

President – Tony McGrath  
Vice-President – Judy Black  
Secretary – Peter Hurley  
Treasurer – Gregg Dill

#### Directors

Matthew Dyer  
David Hoskin  
John Nangreaves  
Jaime Whynot  
2 OPEN positions

Judy noted that there are two open positions. According to our Centre's Bylaw #1, there is a requirement for 5 to 10 directors, and we have met that requirement; however, we are open to nominations for the two remaining positions. Nominees must be a member in good standing for at least one year.

There were 3 calls for nominations from the floor for the 2023 Board of Directors. Dave Robertson volunteered to be nominated for one of the open positions; Peter Hurley seconded the nomination. Dave was thanked for his volunteerism. Gregg also clarified that 2024 would be the first year of another 5 years that he could potentially hold the Treasurer position.

**231202AGM-Mot05:**

It was moved by Paul Heath and seconded by Jerry Black to close nominations.  
CARRIED unanimously.

There being no further nominations, the 2024 Board of Directors positions were elected by acclamation. Congratulations to the newly elected Board. Tony McGrath introduced himself, his history with the RASC, and his visual observing experiences. He looks forward to working with everyone in the coming year.

#### **4. Call for Nominations for Appointed Positions**

The Board had approved appointments at previous deliberations. Judy Black stated Mary Lou Whitehorne continues to be the Honorary President until December 2024.

OPEN	Auditor, 2023-2024
Peter Hurley, Tony Schellinck	DSP Committee, Co-Chairs
Judy Black	Governance Committee
Jerry Black	Librarian
Judy Black	National Council Representative
Peter Hurley	Nominating Committee
Chris Young	Chair, Nova East Planning Committee
Lisa Ann Fanning	Nova Notes, Editor
John McPhee	Nova Notes, Copy Editor
David Hoskin	Observing Chair
David Hoskin	Education & Public Outreach (EPO), Chair
John Liddard	SCO Manager
Jerry Black	Webmaster

Please notify the Secretary, Peter Hurley of any further nominations. Judy stated the appointments would be approved by the incoming Board at their January 2, 2024, meeting.

Jerry noted that someone else could be the Librarian as he is finding it difficult to manage the IT components of our member's meeting in addition to bringing out the cart. If someone was interested, he could assist them with the web side of the library holdings. It was noted that the webmaster position does not have the meeting IT components in the position description.

**231202AGM-Mot06:**

Moved by Dave Chapman and seconded by Gregg Dill that the Board actively research an appointment for the Librarian role.  
CARRIED.

#### **5. Adjournment**

**231202AGM-Mot07:**

Moved by David Hoskin and seconded by Bob Russell to adjourn.

The meeting adjourned at 1:44 PM AST.



# CENTRE MEETING

## Welcome - David Hoskin

RASC Halifax Director, Observing / EPO Chair and program emcee David Hoskin welcomed everyone to the monthly meeting.

## David Hoskin - Photo Montage

David presented photographs and sketches from Centre members Jerry Black, Judy Black, Michael Boschat, Barry Burgess, David Chapman, Tim Doucette, Lisa Ann Fanning, David Hoskin, Blair MacDonald, John McPhee.

## Special Presentation:

### Percival Lowell and the Canals of Mars

Our guest speaker presented "Percival Lowell and the canals of Mars."

## 2024 Calendars & ETU Guides for sale

2024 RASC Calendars are for sale for \$25 and Explore the Universe (ETU) Guides for \$20. Money can be sent via eTransfer to the treasurer to purchase one if you cannot purchase in person.

## Paul Heath - Food for the Soul - Illusion

Paul presented his poem *Illusion*, which can be read on page 10 of this edition of Nova Notes.

## News from the Board presented by Patrick Kelly

- St. Croix Observatory  
The road is passable but still needs more work!  
The lockbox is being moved next to the gate.  
Plans to resume members' nights are currently in the works.
- Astrophotography Contest - There are not enough entries for the contest, so in lieu of the various categories, this year's contest will be People's Choice.
- Upcoming Members' Meeting dates for 2024- Jan 6, Feb 3, March 2, April is cancelled (Close to the eclipse, many people may be traveling), May 4, June 1.

## David Hoskin (EPO/Observing Chair) - What's up for December, 2023

David reviewed highlights of the December sky and reminded us of the Winter Solstice, which will take place Dec. 21 at 11:27 PM. The earliest sunset will be 4:33 PM Dec. 7-12. Also highlighted are the Sun, solar activity, the Moon, and targets needed to check off for Explore the Universe, and when they can be viewed. He also highlighted planetary positions, constellations, stars (including double and multiple) and deep sky objects. Remember, each month, you can find David's presentations on the homepage at <http://halifax.rasc.ca>.



THANK YOU, always, to our IT / AV team who makes our meetings come to life, whether in person or hybrid. Pictured here: Bob and Jerry setting up for the December meeting. Absent from the photo is Peter Hurley.

## **Nova Notes: The Newsletter of the Halifax Centre of the RASC**

**PO Box 31011, Halifax, Nova Scotia B3K 5T9**

*Nova Notes* is published five times a year, in February, April, June/July, September/October and December.

The opinions expressed herein are not necessarily those of the Halifax Centre.

Articles on any aspect of astronomy and related activities will be considered for publication.

# 2023 Annual Reports

## 2023 Annual Report: President

Having been nominated and elected within a month left me with little time to get up to speed; thankfully Judy Black had prepared a “welcome package” so I could make some sense of it all. I was “just a member”, not really knowing the machinations of the Society, and I assure you they are considerable and sometimes complex. We are so privileged to have such a dedicated and well-informed Board at our Centre, they can and do handle everything that comes at them with poise and grace.

My first challenge was to try to make some headway into the common perception that the National Centre was on fire; it wasn't on fire, but it was clearly in danger of sinking. Fortunately, again, Judy Black was able to separate the chaff from the seed for me, being the Chair of the National council. There were some hard decisions to be made, and I sincerely hope we made the right ones. The National office has since regained a strong footing and is moving forward with some clear direction.

I am happy to report SCO is now fully electrified, including heat in the warm room. Many thanks to all that helped to make that possible, it will be a great benefit to future members and guests.

Unfortunately, Nova East had to be cancelled due to storm damage at the park. The committee had done an incredible job at organizing everything down to the smallest detail, only to end in disappointment. They truly deserve kudos for the work they put in, I can't thank them enough.

Along the way was plenty of business as usual, and I was amazed at how efficiently the Board handles everything as it comes. I can't thank them enough for all the work they do, which is so much more than I realized. I'm sure the membership at large enjoys the monthly meetings, Nova East, and other special events the Centre has, but behind every hour of meetings and events are countless hours of work by the board and committee members. It was truly a privilege to work with them.

Here is the list of the amazing 2023 RASC Halifax Centre team whose efforts made the past year possible.

<b>Board of Directors</b> <ul style="list-style-type: none"><li>• President: John Nangreaves</li><li>• Vice-President: Patrick Kelly</li><li>• Secretary: Peter Hurley</li><li>• Treasurer: Dave Lane / Gregg Dill</li></ul>	<ul style="list-style-type: none"><li>• Directors:<ul style="list-style-type: none"><li>◦ Judy Black, Matthew Dyer, David Hoskin, Toy McGrath, Kathy Walker</li></ul></li></ul>
<b>Appointed Positions</b> <ul style="list-style-type: none"><li>• Honorary President: Mary Lou Whitehorne</li><li>• Editor, Nova Notes: Lisa Ann Fanning</li><li>• Copy Editor, Nova Notes: John McPhee</li><li>• Governance Committee: Judy Black</li></ul>	<ul style="list-style-type: none"><li>• Librarian: Jerry Black</li><li>• National Council Representative: Judy Black</li><li>• Observing Chair: David Hoskin</li><li>• Education &amp; Public Outreach (EPO) Chair: David Hoskin</li><li>• SCO Manager: John Liddard</li></ul>
<b>Auditor 2022-2023</b> Dave Chapman (appointed Nov. 28/23)	<b>Nominating Committee</b> <ul style="list-style-type: none"><li>• Chair: Peter Hurley</li><li>• Members: Chris Young, Judy Black, Pat Kelly</li></ul>

<p><b>Governance Review Committee</b></p> <ul style="list-style-type: none"> <li>• Chair: Judy Black</li> <li>• Members: Patrick Kelly, Gregg Dill</li> </ul>	<p><b>Nova East Planning Committee (NEPC)</b></p> <ul style="list-style-type: none"> <li>• Chair: Chris Young</li> <li>• Members: Dave Lane (Treasurer), Dave Chapman, Lisa Ann Fanning, Patrick Kelly</li> </ul>
<p><b>Halifax Centre Astroimaging Contest</b>  Adjudicators: Blair MacDonald, Tim Doucette, Jason Dain</p>	<p><b>Website Maintenance &amp; Updates</b>  SMU: Tiffany Fields, Dave Lane  RASC &amp; Nova East: Judy &amp; Jerry Black</p>
<p><b>Dark-Sky Preserve Committee</b></p> <ul style="list-style-type: none"> <li>• Co-Chairs: Peter Hurley, Tony Schellinck</li> <li>• Members: Judy &amp; Jerry Black, Dave Chapman, David Hoskin, Chris Young</li> </ul>	<p><b>Observing Committee</b></p> <ul style="list-style-type: none"> <li>• Chair: David Hoskin</li> <li>• Members: Dave Chapman, Melody Hamilton, Stephen Payne</li> </ul>

I would be remiss if I did not thank those who are stepping down from their roles. Dave Lane resigned from his role as Treasurer in March and from all other RASC-related roles. Our Centre owes him a huge debt of gratitude for the work he accomplished this past year and for his contributions over the many years. Kathy Walker is stepping down after being elected to the Board for the past three years; she played an integral role developing guidelines for SCO usage during the pandemic and has provided valuable input throughout her tenure. Pat Kelly is also stepping down from the Board after serving 40 years in various roles locally and nationally; he has agreed to remain as a member of the Governance Committee. Many thanks to these dedicated members for their expertise and time spent on RASC Halifax endeavours.

Clear Skies!  
John Nangreaves, President  
RASC Halifax Centre

## 2023 Annual Report: Vice-President

I have chaired meetings of both the Board of Directors upon occasion and a couple of Member's meetings this year and presented news from the Board, so I have been somewhat busier than in the past!

I managed monthly meeting announcements on Facebook and Meetup.

As in the previous year, I contributed to updating policies as part of the Governance Committee as well as a few other smaller projects arising from Board meetings.

Respectfully submitted,

Patrick Kelly, Vice-President  
RASC, Halifax Centre



# 2023 Annual Report: Secretary

Duties of the Secretary include provision of minutes, agendas and meeting announcements to the Board of Directors and the members of the Centre. An additional duty is to book meeting rooms through St. Mary's University (SMU) Conference Services. SMU has generously provided us with access to room AT101 for our Members meetings and we are grateful to SMU for their support. Member's meetings were held on the first Saturday of the month from January to June and September to December. They generally consisted of welcome and introductions, a photo montage of astrophotography images posted by members during the preceding month presented by David Hoskin, a monthly installment of Food for the Soul by Paul Heath, What's Up? for the coming month presented by David Hoskin, news from the Board, a guest speaker, other news items presented and announcements and discussion of upcoming Centre events. Some of the highlights included presentations from:

- Nathan Hellner-Mastelman (Size and Scale as well as Seeing Beyond)
- Silas Eastwood (from Halifax Citadel Highschool)
- Tarek El Wazzi (Lebanon: nightlife of a different genre)
- Jeremy Huzub (Making your own Luck: A Guide to Aurora Chasing and photography)
- Patrick Kelly (The Sun is not an average Star. The Earth is not an average planet)
- Stéphane Picard (Astrotourism - Creating new opportunities in an industry ever more reliant on creating experiences)
- Chris Young (Moon Lore; plus instalments of Sky Lore)
- Blake Nancarrow (Observing. Looking up... now and in the future)
- Blair MacDonald (Challenging Astroimages: Dying Stars)
- Laura Mclarnon (Space Medicine)
- John Read (StarGaze NS)
- Jason Dain (Burning the Candle at Both Ends: My Trip to Lapland)
- Tim Doucette (Hawaii! Stars in His Eyes! (Tim's Trip to the Canada-France-Hawaii Telescope (CFHT))
- Guest Speaker (Percival Lowell and the Canals of Mars)

As in 2022, Members meetings were "hybrid meetings" held in person in SMU AT101 and streamed simultaneously using the computer video conferencing application Zoom so that those choosing not to attend in-person or unable to travel from a remote location could still participate. Recordings of the Members meetings can be streamed from the Centre's YouTube channel at <https://www.youtube.com/@RASCHalifax> and minutes can be found in Nova Notes. Thanks to Dave Lane, Jerry Black and Bob Russell for applying their amazing skills in computer and audio-visual technology to make these hybrid meetings happen.

Meetings of the Board of Directors were usually held on the Tuesday preceding the Member's meeting. There were no Board meetings in July or August. There was a Special Meeting by Requisition held on October 24 to review a revision of the Terms of Reference of the RASC National Council. Minutes from Board meetings can be found on the Centre website at <https://halifax.rasc.ca/index.php/about-us/halifax-centre-board-minutes>.

It has been another unusual year for Halifax Centre. While restrictions related to COVID-19 have been removed, COVID-19 is still around, and it's certainly had a continuing influence on society in general and on the activities of our Centre. And then there were the fires and the floods. A consequence of the latter, damage to the penstock associated with the dam located upstream from the Centre's St. Croix Observatory (SCO) had an impact on our access to the observatory. However, we continued to maintain some use of the observatory and tried valiantly to hold our Annual BBQ in September and again in October associated with viewing the partial annular eclipse, but the weather didn't cooperate on either date. In addition, several Board members have also had to deal with challenges in their personal lives.

Kejimikujik Dark Sky Weekend held on August 11-13 was a great success, even if Sunday was rained out. In partnership with the Park, we interacted with more than 900 campers Friday evening and Saturday in a variety of activities. Find more details about the Dark-Sky Weekend in the Dark-Sky Preserve Committee Annual Report. Unfortunately, the Nova East Star Party which was scheduled for August 18-20 had to be cancelled because Smiley's Provincial Park was closed due to damage caused by the floods. Find more details in the Nova East Committee Annual Report.

The membership of the Centre as of November 2023 totaled 159, down slightly from 171 a year ago. The breakdown is:

Regular	105
Family	28
Youth	6
Life	20

This has been my fourth year serving as Secretary of the Centre. I would like to thank the Board for being such a great team to work with. In addition, I would like to thank them and Centre members for their support and for being such a great Society. It is a pleasure.

Respectively submitted,

Peter Hurley, Secretary  
RASC Halifax Centre

## 2023 Annual Report: Treasurer

See also the draft minutes of the December 2, 2023 AGM on page 21 of this edition.

The **Comparative Income Statement** is straight forward with a few things highlighted. The Membership fee income decreased \$638.81. There was a change in the Centre fees from \$23.00 to \$28.00 National neglected to increase the amount they charged; the 2022 increase showed up this year. The Nova East income net was \$1,190.00. The value of depreciation and write-offs has doubled. Depreciation was 3% but it was the recommendation of last year's auditor that it be increased to 10%. Nova East expenses were due to reimbursements being made. Nova East was cancelled due to flooding at Smiley's Provincial Park. Gregg noted there is a deficit showing of \$820.26. If 'Depreciation and Write-offs' (\$1056) is not included as an expense, there would be a surplus of \$502.00.

	Years Ended September 30		Amount of Increase or (Decrease) during 2023
	2023	2022	
<b>Revenue</b>			
Membership Fees	\$3,364.77	\$4,003.58	(\$638.81)
Donations	\$350.00	\$857.88	(\$507.88)
Observatory Donations	\$0.00	\$240.00	(\$240.00)
Education & Outreach	\$0.00	\$50.00	(\$50.00)
Interest	\$63.14	\$2.25	\$60.89
Sales of Merchandise	\$340.00	\$525.00	(\$185.00)
Nova East (Net)	\$1,190.00	\$996.19	\$193.81
Nova Notes Print Subs	\$0.00	\$260.00	(\$260.00)
National Processing Fees (Income)	(\$4.91)	\$0.00	(\$4.91)
Miscellaneous	\$0.00	\$20.00	(\$20.00)
<b>Total Revenue</b>	<b>\$5,303.00</b>	<b>\$6,954.90</b>	<b>(\$1,651.90)</b>
<b>Expenses</b>			
Meetings	\$230.00	\$230.00	\$0.00
Newsletter	\$346.43	\$265.97	\$80.46
Depreciation and write offs	\$1,056.23	\$490.47	\$565.76
Equipment and Supplies	\$0.00	\$0.00	\$0.00
Purchase of merchandise	\$490.51	\$453.47	\$37.04
Office Administration	\$0.00	\$444.69	(\$444.69)
Educational Activities	\$35.80	\$231.14	(\$195.34)
Insurance	\$1,837.00	\$1,706.00	\$131.00
Awards and Donations	\$120.00	\$0.00	\$120.00
National Office Processing	\$106.53	\$113.01	(\$6.48)
Operating Expenses SCO	\$710.76	\$1,076.39	(\$365.63)
Miscellaneous (NE refunds)	\$1,190.00	\$0.00	\$1,190.00
<b>Total Expenses</b>	<b>\$6,123.26</b>	<b>\$5,011.14</b>	<b>\$1,112.12</b>
<b>Operational Surplus (Deficit)</b>	<b>(\$820.26)</b>	<b>\$1,943.76</b>	<b>(\$2,764.02)</b>

The **Comparative Balance Statement** as of September 30, 2023 shows the Centre has \$10,175.49 in cash. Two GICs worth \$4000 each have the principal reinvested. Accounts receivable includes dues received by National in September and paid in October. Library was depreciated 10% from previous year's estimated worth. Observatory equipment relates to the telescopes and other related equipment which again depreciated 10%. The amount cited in *Miscellaneous Estimated* has been there several years; it has been written off. Accounts payable is doubled, largely due to the \$1190 refunds for Nova East.

Royal Astronomical Society of Canada, Halifax Centre Comparative Balance Sheet Years Ending September 30, 2022 and September 30, 2023			
September 30, 2023 Activity to: September 30, 2021	Years Ended September 30		Amount of Increase or (Decrease) during 2023
	2023	2022	
<b>Assets</b>			
Cash	\$10,175.49	\$8,539.13	\$1,636.36
Investments	\$8,000.00	\$8,000.00	\$0.00
Accounts Receivable	\$282.22	\$240.38	\$41.84
Library Estimated	\$1,183.11	\$1,219.70	(\$36.59)
Observatory Equipment	\$9,178.78	\$10,198.42	(\$1,019.64)
Miscellaneous Estimated	\$0.00	\$0.00	\$0.00
<b>Total Assets</b>	<b>\$28,819.60</b>	<b>\$28,197.63</b>	<b>\$621.97</b>
<b>Liabilities</b>			
Accounts Payable	\$2,111.30	\$935.04	\$1,176.26
<b>Capital</b>			
Nova East Working Equity	\$5,000.00	\$5,000.00	\$0.00
Common Equity	\$21,708.30	\$22,262.59	(\$554.29)
<b>Total Capital</b>	<b>\$26,708.30</b>	<b>\$27,262.59</b>	<b>(\$554.29)</b>
<b>Total Liabilities and Capital</b>	<b>\$28,819.60</b>	<b>\$28,197.63</b>	<b>\$621.97</b>

## 2023 Annual Report: National Council

In June 2023, I was re-elected as Chair of the National Council (NC). It has been a busy year building on the momentum of 2022.

National Council met six times in 2023 – February 5, April 2, June 4, September 24, November 5, and the upcoming December 3. National Council no longer meets in person in conjunction with the General Assembly; both are now held independently via Zoom. In collaboration with my fellow National Council Representatives, we have worked on the following projects in 2023.

Centres Manual was approved; however, subsequent edits have postponed the date of posting on the RASC site. It is hoped this can be accomplished by early 2024.

Hybrid meeting best practices document was produced for those Centre sharing challenges and was circulated to National Council members.

The draft revisions to the RASC Policy C11: National Council Terms of Reference were developed. (details below)

A welcome package for new National Council Representatives is being created. We should see its development and implementation in 2024.

Centres are being asked for input regarding hard copy versus digital Observer's Calendar and Observer's Handbook. The NC has begun discussion with the Publications Committee, specifically Chris Gainor and Chris Beckett.

As noted above, much activity in the past year has centred around redefining the role of the National Council within the RASC. The National Council and Board of Directors have worked to improve the working relationship between them. The RASC President (Charles Ennis then Michael Watson), RASC Executive Director (Phil Groff then Randy Attwood (interim) then Jenna Hinds) and other Board members have regularly attended meetings to provide guidance when needed and to update on Board activities for which they requested input.

In February, a special meeting was held with Centre Presidents in attendance; it was the first of what will be quarterly financial updates to the NC. The purpose of this meeting was twofold:



(1) to provide a forum for the Centre Representatives to National Council and their Centre's Presidents to see and hear the update of the RASC Board of Directors deliberations regarding the financial status of the RASC, and what plan of action they have taken and intend to take, and (2) to provide the opportunity for positive feedback to the Board regarding the plan of action presented. Charles Mountain (accountant), Catherine Carr (RASC Treasurer), Charles Ennis and Phil Groff provided an overview of the finances then addressed concerns raised. The Board provided recommendations regarding SkyNews, the robotic telescope and simplification of the member fee structure.

In June, another special meeting was held in conjunction with the Presidents. Charles Ennis, Catherine Carr, Michael Watson (Vice-President) and Jenna Hinds provided an update on progress made and addressed concerns raised.

Election of the officers was held June 4, 2023. All three NC Representatives holding the officer roles were re-elected by acclamation – Judy Black of Halifax (Chair), Jim Fairles of Kitchener-Waterloo (Vice-Chair) and Eric Klaszus of Calgary (Council Recorder).

Members were provided two documents to consider for redeveloping the RASC Policy C11: National Council Terms of Reference. One was a 3-columned document developed by the NC Officers and contained what existed in the previous C12, the suggested additions/deletions, and the rationale for the changes; it contained most of the same sections as the original policy C12. A second document was produced following a Task Team discussing two specific and potentially contentious components of the policy – quorum (not mentioned in C12) and membership. This discussion also led to more clearly defining who were “NC members” versus guests or board liaison and voting privileges. The final review will be held on December 3 at which time it will be forwarded to the Board for approval. At the November 5 meeting, content of a revised policy was determined. The recommendation of forwarding it to the RASC Board of Directors for approval can be made at the December 3 NC meeting.

Priorities for 2024 were determined at the September meeting.

- Consultation with the RASC Board of Directors regarding the RASC financial position will be ongoing.
- Policy C11 should be completed in early 2024 after any suggested Board revisions followed by their subsequent approval.
- Improved communication mechanisms within the National Council will be addressed and includes development of the NC welcome package and a resource/education online package for all NC members.
- Membership services needs to be defined and the “true” costs of providing such services needs to be determined.
- RASC Committee consultation will continue; the NC is currently discussing electronic versus paper copy of some publications with the Publications Board.
- Other business would be prioritized as it arises.

I will thank my fellow officers for their assistance in guiding the NC through what was challenging times – Jim Fairles, Vice-Chair (Kitchener-Waterloo) and Eric Klaszus, Council Recorder (Calgary). I would also like to thank the members of Terms of Reference Task Team – Alister Ling (Edmonton), Dennis Lyons (Winnipeg), Randy Attwood (Toronto, RASC Board of Directors), Kim Hay (Kingston), Don Town (Ottawa), Michael Watson (RASC President), and my two fellow NC Officers.

With Centres holding their AGMs during the past few months, there is turnover in members, ensuring the NC remains robust.

Respectfully submitted,

Judy Black  
NC Representative, RASC Halifax Centre  
Chair, RASC National Council

# 2023 Annual Report: Governance Committee

I would like to thank my fellow members on the Governance Committee, Patrick Kelly and Gregg Dill, for the work accomplished in the past year.

No changes to the RASC Halifax Centre Bylaw No. 1 nor the Centre's Objectives were recommended.

With the recommendations from the Committee, the Board of Directors approved the following additions and revisions to the RASC Halifax Centre policies and guidelines found on the RASC Halifax website.

- a) **Revision: G7: RASC Halifax Centre Website Standard Operating Procedures (SOP)** – (Adopted November 2, 2019; Revised February 28, 2023) Updated to reflect upgrades to b=new management system.
- b) **Revision: G8: RASC Halifax Centre Astro-imaging Contest** – (Adopted May 4, 2019; Revised May 2, 2023) Clarification of the contest regarding sufficient number of submissions.
- c) **PD13: Position Description (appointed) – Webmaster** – (Adopted May 2, 2023) Outlines qualifications and responsibilities.
- d) **Policy G13: Policies & Recommendations Regarding the Use of Green Laser Pointers (GLPs) at Halifax Centre Event** – (Adopted May 2, 2023) Power limitations, approval for use and reporting usage of GLPs at RASC events.
- e) **Policy G14: Policies Regarding Donations to the RASC Halifax Centre** – (Adopted October 30, 2023) Defines how financial and equipment donations are to be considered and accepted, and how the donations are to be recognized.

The Governance Committee will continue to review all Halifax Centre policies and position descriptions. Members can look forward to being apprised of tweaks to the Centre's policies and potentially some changes to our Bylaw #1 in the coming year.

Respectfully Submitted,

Judy Black, Chair  
Governance Committee  
RASC, Halifax Centre

# 2023 Annual Report: Library

The recommendation from the previous 2022 Library report to upgrade the website Joomla library software to the Alexandria Book library (Joomla 4 compatible) was completed in 2023. The library contains 235 entries in its on-line catalogue (<http://halifax.rasc.ca/index.php/library>).

One offer of book donation was declined as it would have been a duplicate set.

The library remained largely inactive this year partially due to unavailability of the library cart and the librarian not promoting library use during meetings. The mini-Ralph robotic telescope is currently co-housed in the storage space at SMU which has prevented access to the cart this fall.

T. Fields (astronomy technician, Astronomy Technician | Burke-Gaffney Observatory Department of Astronomy & Physics) has posed the questions “Is it necessary to continue to store (library cart) at SMU? Does it get used often?”

Recommendation:

Rearrange the storage room to provide easy access to the cart during the monthly meetings (switch the cart location with the mini-Ralph).

While it is convenient for me to act as librarian as I regularly attend the meetings and assist in the A/V aspects of the meeting, if there was someone else willing to take on this roll with an enhanced passion for the library, I would be willing to assist them on the website-based activities. As it is, I feel I'm not supporting the library to the degree it deserves.

Respectively submitted,

Jerry Black, Centre Librarian  
RASC, Halifax Centre

## 2023 Annual Report: Nova East Star Party

**STARS AND BIRDS** was the proposed theme for our star party held at Smiley's Provincial Park during the weekend of August 18-20, 2023. This was to have been the 36<sup>th</sup> Nova East.

Many thanks to Lisa Ann Fanning for the 2023 logo design for printing on the Nova East t-shirt, and to Gregg Dill for setting up the printing of the t-shirts at Pro Design Cresting Ltd. in Truro. The T-shirt order was cancelled at the last minute.



### 2023 NE Planning Committee (NEPC):

Members included Chris Young (Chair), David Lane (Treasurer), David Chapman, Lisa Ann Fanning, Kathy Walker, Tony McGrath, and Patrick Kelly, with valuable support from Jerry Black and Paul Gray. Meetings were on Zoom with planning meetings held March, April, and May 9, plus the wrap-up meeting held October 24, 2022. The success of Nova East 2022 was because of the dedication, imagination and work done by each of the members during the planning and implementation phases of this event. Like the 2024 NE the Committee wanted this event to be an observing weekend and a social event. All activities and decisions considered for previous NE's were reviewed and updated.

Many thanks to Judy Black for making our planning easy with her Schedules, Minutes and Task Lists from NE gone by!

### Weather:

An incoming storm forced the cancellation of Nova East. Alternate sites were suggested and discussed on short notice, both within the committee, our Board and several volunteers (thank you John Read and Paul Gray) against a list of our members requirements and compared to the amenities of Smiley's. An alternate date for NE was also considered. After much discussion, we regrettably cancelled the event.

Much of the preparation for Nova East 2024 is already done, although we must inquire on the status of Smiley's Provincial Park which took a beating. As Chair, I will inquire about its status and advise the Board.



### **Planned Speakers and Events:**

Jason Dain was to be our keynote speaker: *“Burning the Candle at both Ends: a Birding and Aurora trip to Lapland”*. We were fortunate to have Jason give this presentation at our Members Meeting in the fall.

Dave Chapman on: *“Celestial Birds: their Lore and Wonder”*.

*How to Clean the Mirrors of your Newtonian Reflector (by prior arrangement)* – David Chapman

### **Family Activity:**

*Walk the Solar System* – David Hoskin

***Sherman Williams Walk – Birding at Smileys*** – Pat Kelly

### **Field Observing Presentations:**

There were to be two field presentations on Friday and Saturday evenings that were open to registrants and Smiley’s Provincial Park campers alike:

- Paul Heath – Sky Tour and Lore
- Tony Schellinck – Binocular table

### **Door Prizes:**

Dave Chapman and Chris Young, with assistance from Lisa Ann Fanning, and other donors, collected numerous Door Prizes that are safely stored for NE 2024. A budget of \$600.00 was allotted with a few items to yet collect. It is expected that we are within budget.

### **Other Planned Highlights:**

An ***Astro Breakfast*** was planned for Saturday and Sunday morning breakfast that came with coffee, juice, muffins, donuts and fresh whole fruit.

The ***Astronomer’s Lounge*** was planned. Individual servings of cookies, chips, and pop and hot chocolate were to be provided.

A ***Flea Market*** was planned for Saturday.

### **Task Chart:**

The 2022 Task Chart acted as a guide for the 2023 Nova East Planning Committee and provided the timeline for planning the event. This document was used throughout the planning process and revised as required.

### **Financial Statement:**

All registrations that were received were refunded following the cancellation.

### **Date of 2024 Nova East:**

As approved by the Board of Directors at a prior meeting and is now included in the 2024 RASC Calendar, Nova East 2024 will be held the nights of August 9-11. The New Moon is on August 4.

Respectfully Submitted,  
Chris Young, Chair  
Nova East Planning Committee (NEPC)

# 2023 Annual Report: Nova Notes

To date four issues of Nova Notes have been published, with the fifth and final issue (Vol 54 No 5) for 2023 to be published at the end of December (content deadline is December 15, 2023.)

Nova Notes' editorial staff consists of Lisa Ann Fanning (editor) and John McPhee (copy editor). Additional review is provided by Judy Black.

Jerry Black assists with posting to the Halifax Centre website.

Once posted, editions are promoted with a Member Announcement (via email), and announcements on the RASC Facebook page and Listserv.

Edition Sizes:

- Jan/Feb 2023 (Vol 54 No 1) issue was 43 pages total.
- March/April 2023 (Vol 54 No 2) issue was 28 pages total.
- May/June 2023 (Vol 54 No 3) issue was 23 pages total.
- Sept/Oct 2023 (Vol 54 No 4) issue was 21 pages total.
- Nov/Dec 2023 (Vol 54 No 5) is TBD

Regular features include:

- *From the Editor* (Lisa Ann Fanning)
- Halifax centre Information page
- *Food for the Soul* (poetry by Paul Heath)
- *Puzzle Corner* (some were reprints from prior editions and others newly authored by Judy Black)
- *Member Mentions* (Members being featured in other media)
- *Members' Universe* (a new feature with member news and submitted work)
- Member's Meetings reports
- *From The President* appeared in two editions.
- *Moonscapes* is a feature where David Hoskin highlights a region or feature on the Moon.

Main cover photos were provided by: Jerry Black (The Heart Nebula), Jason Dain (Northern Lights), David Hoskin (Sunspots in Ha) and Jason Dain (Perseids Meteor Shower Peak Composite).

In 2023, contributors of articles, features, photos and sketches include: Jerry Black, Judy Black, Michael Boschat, David Chapman, Jason Dain, Paul Heath (Poetry), David Hoskin, Lisa Ann Fanning, Patrick Kelly, Jeremy Kuzub, Blair MacDonald, John Nangreaves (From the President), John A. Read, Mary Lou Whitehorne

The 2022 AGM Minutes and Auditor's reports appeared in the Jan/Feb 2023 edition.

Themes:

- In the Jan/Feb 2023 edition, we remembered Terry Dickinson (1943-2023) and commemorated Comet ZTF.
- The March/April 2023 edition had a Northern Lights theme, with a stunning cover photo by Jason Dain, as well as articles by Jason Dain and Jeremy Kuzub, aurora chasers.
- While the May/June 2023 edition did not have a specific theme, several Centre award winners were featured prominently in articles announcing their achievements.
- There was no specific theme that emerged for the Sept/Oct edition.
- There was no specific theme that emerged for the Nov/Dec edition containing the Annual Reports.

Once again, we extend our sincerest thanks to the many folks who help make *Nova Notes* a success!

Respectfully Submitted,  
Lisa Ann Fanning and John McPhee  
*Nova Notes, RASC Halifax Centre*

## 2023 Annual Report: Observing Committee

The Chair of the Observing Committee is David Hoskin. Committee members include Dave Chapman (past Chair), Melody Hamilton, and Stephen Payne. Dave Chapman is also members of the Society-wide RASC Observing Committee with Melody as a past member, and both have been active in that domain, reviewing applications and guiding policy. Stephen Payne organizes Planetarium events at Dalhousie University.

With the easing of restrictions due to the COVID-19 pandemic, RASC Halifax Centre was able to engage in public observing events once again. RASC Halifax Centre members who volunteered at Kejimikujik Dark Sky Weekend engaged in and offered eyepiece observing, as well as electronically assisted astronomy, to the public. Binocular observing of deep-sky objects was organized and hosted by Tony Schellinck. Solar observing was popular at Saturday's Astronomy Drop-in. Unfortunately, events on Sunday were cancelled due to rain.

Nova East 2023 was cancelled due to the closure of Smiley's Provincial Park in response to flood damage.

Public observing on the boardwalk behind the Discovery Centre was offered by RASC Halifax Centre members on International Astronomy Day (April 29). However, poor weather prevented public observing by RASC Halifax Centre members on International Observe the Moon Night (InOMN) (October 21).

Activity at the Halifax Centre's Saint Croix Observatory was low, in part because of the late spring provincial ban on woods travel in response to wildfire risk, as well as flood damage to the access road in late July. Availability of the key needed to unlock/lock the road gate contributed to low activity; however, this obstacle to ready access to SCO has now been addressed. The Fall SCO BBQ was canceled due to rain on both September and October dates.

David Hoskin prepared and presented *What's Up?* at monthly members' meetings to highlight observing opportunities for the coming month. *What's Up?* presentations for 2023 are available on the Halifax Centre's You-Tube Channel and the Halifax Centre's website.

There were no Observing Certificates awarded in 2023.

Respectfully submitted,



David Hoskin  
Observing Committee Chair  
RASC, Halifax Centre

## 2023 Annual Report: Education and Public Outreach (EPO)

Outreach events continued to experience a resurgence in 2023.

Dark-Sky Weekend on August 11-13 at Kejimikujik National Park was a great success. Over 2 nights there were 797 registrants for Sky Circle events that included Night Sky Tour and Sky Lore presentations by Dave Chapman and Chris Young, guided binocular tours with Tony Schellinck, eyepiece observing, and electronically assisted astronomy that allowed registrants to view several celestial objects on a tablet screen. The Astronomy Drop-in sessions on Saturday and Sunday at Merrymakedge Beach engaged with a total of 120 interested individuals. Walk the Solar System on Saturday was attended by 35 campers. Unfortunately, Sunday events were cancelled due to rain. There were 12 volunteers from RASC Halifax Centre who assisted with program delivery.

On January 17, David Hoskin gave his "Astronomy 101" presentation to 20 grade-7 students at Halifax Independent School. On January 27, David Hoskin and Lauren Westhaver led a stargazing session at York Redoubt for 30 members (mostly family groups) of the Halifax Young Naturalists Club. On January 30, David Hoskin gave his "Astronomy 101" presentation via Zoom to 10 members of the Cobequid Young Naturalists Club.

On February 2, Dave Chapman hosted an astronomy program for 17 Beavers. On February 25, David Hoskin gave his "Astronomy 101" presentation to 30 attendees plus 2 staff at Shubenacadie Wildlife Park; after which, David Hoskin, Paul Heath, and Nora Lindner led a stargazing session for the attendees and park staff. Telescopes were used to provide views of the Moon, Jupiter, and several deep sky objects.

On March 31, Jeff Donaldson and Jerry Black led a stargazing session for 20 members of the public at Carols Corner.

On April 29 (International Astronomy Day), Rob and Lisa Fanning hosted an interactive program in astronomy basics for 2 attendees at Bayshore Waterfront Park (Port Monmouth, New Jersey). David Hoskin, Jerry Black, and Peter Hurley manned a RASC Halifax display at the Discovery Centre, focusing on the gas giants and the JUICE mission to Jupiter's largest moons, that engaged 50 members of the public mostly in family groups. In the evening, David Hoskin, Jerry Black, Matt Dyer, Peter Hurley, and John Read shared views of the waxing gibbous Moon in their telescopes with 50 enthusiastic passers-by on the boardwalk behind the Discovery Centre.

On June 6, Rob and Lisa Fanning led a "Horseshoe Crab and Full Moon" walk for a group of 22. On June 7, at the Discovery Centre as a contribution to Project Luna, David Hoskin and Peter Hurley talked to 9 7-to-11-year-old youths and 2 staff members about the Moon and used binoculars and telescopes to view a static image of the Moon.

On July 25, David Hoskin gave his "Astronomy 101" presentation to 30 grade 7-9 campers and 2 staff members at Acadia University's Women in Science and Engineering Camp. A telescope was set up and used to provide eyepiece views of the first quarter Moon.

On August 6, David Hoskin, Jerry Black, and Peter Hurley manned a RASC Halifax display at the Discovery Centre, focusing on the upcoming Perseid meteor shower, that engaged 60 members of the public mostly in family groups.

On September 9, Wayne Mansfield and Tony Schellinck gave a talk on general astronomy and observing with binoculars, as well as demonstrating telescope use, to 16 members of the public. On September 22, Wayne Mansfield and Tony Schellinck participated in the Starlight Festival hosted by Tim Doucette of the Deep Sky Eye Observatory. They presented a slide show about the night sky to 18 attendees and later hosted a binocular and telescope stargazing session. Dave Chapman and Cathy LeBlanc gave their talk on the Mi'kmaw Moons to those at the community centre, and via Zoom to attendees in the other two sites.

On October 5, at the Discovery Centre as a contribution to Project Luna, David Hoskin and Peter Hurley instructed 13 7-to-11-year-old youths and 4 staff members in the use of binoculars and telescopes, which were then used to view static images of the Moon, Jupiter, and Saturn. On October 11, David Hoskin hosted a stargazing session at York Redoubt for 7 members of the Association of Dalhousie Retirees and Pensioners. On October 21, Rob and Lissa Fanning hosted a NASA Observe the Moon Night event at Bayshore Waterfront Park (Port Monmouth, New Jersey) that was attended by 32 members of the public.

On October 24, David Hoskin advised a gentleman on the set-up and use of his new telescope. On October 26, David Hoskin gave his "Astronomy 101" presentation to an audience of 9 at Bedford Public Library, which was followed by telescope observation of the Moon, Jupiter and Saturn.



On November 2, David Hoskin gave his "Astronomy 101" presentation to 60 grade-6 students and 6 adults at King's County Academy in Kentville. This was followed by telescope observation of Jupiter and Saturn. Electronically assisted astronomy was used to show students galaxies and a globular star cluster.

On November 6, David Hoskin met with 16 7-to-9-year-old members of the 3rd Hammonds Plains Embers, plus 3 adults. Jupiter was viewed with a telescope, after which all were shown how to use a star finder and entertained with some sky lore.

Respectfully Submitted,



David Hoskin  
Education and Public Outreach Chair

## 2023 Annual Report: Manager, St. Croix Observatory

It has been a slow year for the St Croix Observatory. We only were able to have one BBQ in 2023 welcoming Lisa Ann and Rob Fanning on their visit to Nova Scotia in early July. Many activities, including our annual BBQ, were impacted this year by Provincial bans during the wildfires, the severe floodings in July, and very poor observing conditions for most of the summer and fall.

We did manage to have several success work parties starting in February via the generous efforts lead by Tony McGrath. Tony and Dave Lane removed the old propane furnace and installed a new, wall mounted, electric heater. No more challenges trying to start a gas furnace. In August, Tony McGrath completed improvements to our recent electrical upgrades by extending an electrical line to the Storeroom/Bathroom and installing lights and an AC outlet. Finally, in September Tony again lead a work party to scrape and repaint some much-needed areas on the buildings at SCO that will help keep the structures sound for the next couple of years.

Earlier in the year, an unfortunate fire of a Minas Energy building at the end of the road forced the need for a locked gate at the entrance of the dirt road. RASC Halifax Centre has been provided a key that can be accessed from a lock box mounted near the generator on the main road before turning on to Salmon Hole Dam Rd. The location of the lock box has presented some challenges for access to SCO, especially when groups of people are attending. We have been working with Minas Energy on a solution to simplify access that we hope to have implemented very soon.

Respectfully Submitted,

John Liddard  
SCO Manager  
RASC, Halifax Centre

## 2023 Annual Report: Nominating Committee

The following is the list of nominations being put forward to all members as of November 23, 2023 through the Announce List. The call for further nominations will be made at the AGM on December 2, 2023.

President	Tony McGrath
Vice-President	Judy Black
Secretary	Peter Hurley
Treasurer	Gregg Dill
Director	Matthew Dyer
Director	David Hoskin
Director	John Nangreaves
Director	Jaime Whynot
Director	OPEN
Director	OPEN

The following appointments were discussed at the Board of Directors meeting of November 28, 2023. The positions will be appointed by the newly elected Board at their meeting in January 2024. The call for further nominations will be made at the AGM on December 2, 2023.

Honorary President	Mary Lou Whitehorne
Auditor 2023-2024	OPEN
Dark-Sky Preserve (DSP) Committee, Co-Chairs	Tony Schellinck, Peter Hurley
Governance Committee, Chair	Judy Black
Librarian	Jerry Black
National Council Representative	Judy Black
Nominating Committee	Peter Hurley
Nova East Planning Committee, Chair	Chris Young
Nova Notes, Co-Editors	Lisa Ann Fanning, John McPhee
Education & Public Outreach (EPO), Chair	David Hoskin
Observing, Chair	David Hoskin
SCO Manager	John Liddard
Webmaster	Jerry Black

**Policy G6: Procedures regarding Nominations, Elections and Appointments** can be found on the RASC Halifax centre website ([https://halifax.rasc.ca/images/documents/G6\\_Nominations\\_Elections.pdf](https://halifax.rasc.ca/images/documents/G6_Nominations_Elections.pdf)).

Respectfully Submitted,

Peter Hurley, Chair  
Nominating Committee  
RASC Halifax Centre