

Vol. 23 Issue 3
Summer 2022

H O R I Z O N

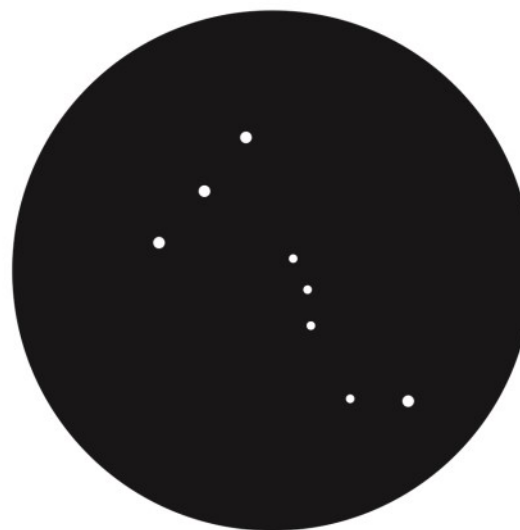
LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA
New Brunswick Centre du Nouveau-Brunswick
THE ROYAL ASTRONOMICAL SOCIETY OF CANADA



Spotting Jupiter
Image by Matthew Despres

I used a Celestron 9.25" Edge HD Schmidt-Cassegrain telescope with a ZWO ASI224 planetary camera to capture 10,000 frames of video, stacked 30% of the best frames and did some sharpening in Photoshop .

GUESS THAT ASTERISM?



Located in Hercules
RA 16.50 Dec 38

**Can you identify this asterism as sketched by
Master Puzzler Ted Dunphy?
The answer lies within.**

**SRAC/RASC Centre du NB Centre
Inc.**

<https://rascnb.ca>

<https://www.facebook.com/RASC.NB>

<https://twitter.com/rascnb>

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Star Party-Events: Paul Owen

Outreach: Curt Nason

Website: Chris Weadick/Trevor Johnson

Social Media: Gerry Allain

Equipment: Chris Weadick

Library: Ted Dunphy

Newsletter Editor: Curt Nason

Centre News and Outlook

Meetings

September 17

Business (am), Presentations 13:00

October 15

Annual Meeting & Presentations

November 19

Presentations 13:00

Public Observing

Fundy Star Gaze

September 2 & 3

Kouchibouguac Fall Festival

September 23 & 24

Irving Nature Park

October 1 (back-up Oct 2)

Fall Astronomy Day

International Observe the Moon Night

News

Congratulations to Len Larkin on
obtaining his Double Star Observing
Certificate!

James Cleland was interviewed by
L'Acadie Nouvelle on the Perseids.

[https://www.acadienouvelle.com/
actualites/2022/08/10/des-conseils-
pour-bien-apprecier-la-nuit-des-
perseides/](https://www.acadienouvelle.com/actualites/2022/08/10/des-conseils-pour-bien-apprecier-la-nuit-des-perseides/)

Starlink Capture

Trevor Johnson

Here is an image that I had taken of the Starlink launch from July 22. On that Friday I just happened to catch the satellite train as it moved from the south to the north and all the satellites were pretty close together. You could have covered most of them with your thumb. I tried to get a picture on Saturday night but I had focusing difficulties. Sunday was a success. The train went almost directly over the house moving south to north.

This launch was for Starlink Group 3-2 and comprised 46 satellites. Approximately 2600 satellites have been launched and according to SpaceX they expect to put as many as 30,000 in orbit.



The image was taken on a Canon t6i with a wide angle 24 mm lens and the exposure was 1 second at ISO1600.

Summer Reads

Yolanda Kippers

Galileo's Daughter

Dava Sobel
Penguin Books (2000)
ISBN 0-14-028055-3

An Astronomer's Tale: A Bricklayer's Guide to the Galaxy

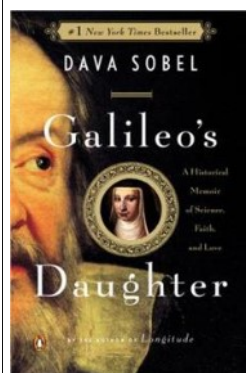
Gary Fildes
Arrow Books (Penguin Random House UK)
2016
ISBN 9781784754389

The End of Everything (Astrophysically Speaking)

Katie Mack
Scribner (2020)
ISBN 978-1-9821-0355-2

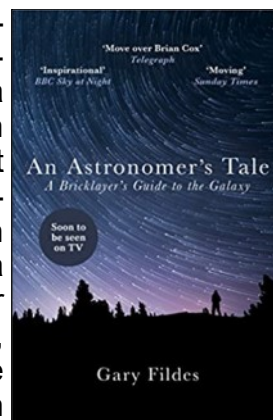
There is no time like the summer to catch up on your reading. The extra daylight in the morning and evening makes stargazing at those times more difficult, but it is often pleasant enough to then sit outside with your favourite book. During the heat of the day with a cold drink, sitting under the shade of a tree or at the waterside, reading provides an escape from chores and other commitments. This summer, in addition to other reading, I have enjoyed three books related to astronomy. All were very different; all three were worthwhile.

The first was *Galileo's Daughter* by Dava Sobel (1999), a biography that reads more like



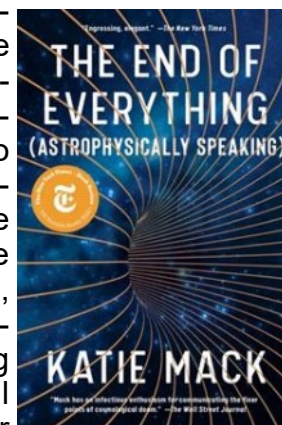
a novel than a dry account of his achievements and his difficulties with the Catholic Church. He is described as an ordinary yet remarkable human being. Of special interest was the presence of the Bubonic Plague during his later years and its effect on his trial and subsequent incarceration. There were restrictions on gatherings and travel, quarantines, monitoring of case numbers, and issues with supply shortages. Sound familiar? Masks were not mentioned, vaccines were not yet available. The book was written before the current pandemic would have been on the author's mind.

The second book was *An Astronomer's Tale (A Bricklayer's Guide to the Galaxy)*, an inspirational memoir by Gary Fildes (2016). Fildes grew up in a somewhat rough and impoverished neighbourhood in the UK. As a child he developed an interest in astronomy but was bullied for his passion. Not finishing high school, he became a bricklayer to provide for his young family but, feeling dissatisfied, he rekindled this passion in middle age. He became more and more involved with amateur astronomers, eventually spearheading the building of the Kielder Observatory, a public



venue in northern England. His efforts earned him an Honourary Master's Degree in Science. The book is a memoir, but it also includes some basic science as well as a seasonal guide to the night sky suitable for beginners. Basically, more of a light read rather than a good resource, it shows what can happen if you follow your dreams and reach for the stars.

The third was *The End of Everything (Astrophysically Speaking)* by Katie Mack (2020). In an entertaining manner, beginning with the Big Bang until the present, Mack takes the reader through five theories on how the Universe may end: the Big Crunch, Heat Death, the Big Rip, Vacuum Decay, and the Bounce. She uses common, everyday occurrences as analogies to complicated astrophysical phenomena. The book is written for the interested layperson, providing a comprehensive overview of ongoing research in space. I will be keeping this book for further reference.



There is still some summer left for good reading. And, oh yes, winter is also a great time to read, as are spring and fall. What are you reading?

Mount Carleton 2022

**Text and images by Paul Owen
unless noted otherwise**

From the highlands of north-central New Brunswick lies the best dark skies in all of the parks in New Brunswick. This park also has bragging rights to being the largest park and is home to more wildlife species than any other part of the province. There are more than 42,000 acres to explore here. Hiking is one of the main attractions of this park with its twin mountain peaks, the highest in the province: Mt. Carleton at 2690 feet (820 metres) and Mt. Sagamook with its impressive 2589 feet (777metres).



***Mount Carleton RASCals
James Cleland, Yvon & Sylvia Hachey,
Richard Haché, Mary King, Amelia Almon,
Trudy Almon, Paul Owen***



***The Milky Way from the Mount Carleton
Dark Sky Preserve***

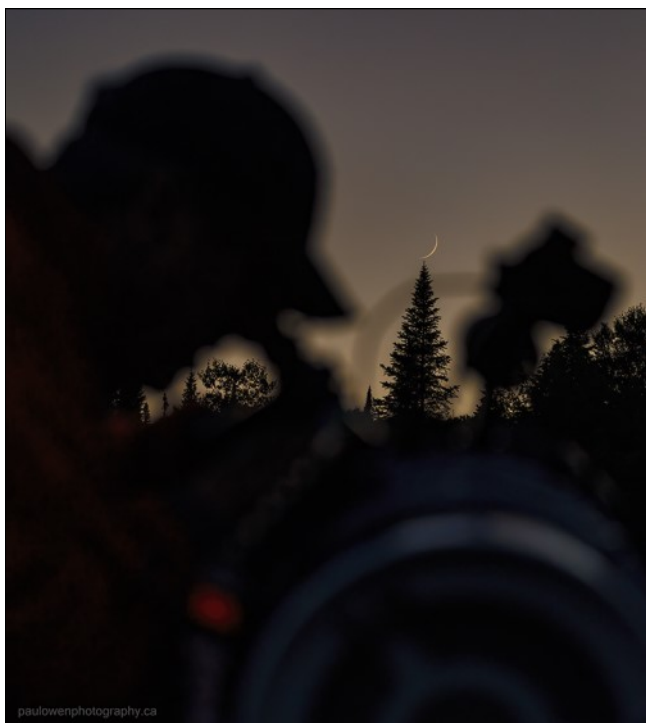
Image by Yvon Hachey

Mount Carleton has the Dark Sky Preserve designation from the Royal Astronomical Society of Canada and it works hard at keeping the skies dark for all to enjoy. Star parties have been held here for three decades and the park also promotes the night sky activities year round. This park is a sought-out dark sky site for many amateur astronomers, even attracting users of a nearby observatory as the skies here are darker than at the observatory site itself.

Many of our local astronomy club members look forward to the stargazing event here each year as it provides Bortle 1-2 skies. If you see clouds at night here they look like black holes in the sky as there is no ground light to reflect up and scatter. When the Milky Way is at the meridian it will actually cast a shadow on the ground. I remember the first time seeing this and it was like seeing Saturn's rings for the first time. What a thrill. Most of the camping sites offer no power as this is a very remote location and even cell service for the most part is non-existent... perfect for the stargazer.



We started off with our presentation around 21:00 and as we were wrapping it up the thin crescent Moon appeared in the southwestern sky. As always it was a crowd pleaser and did not disappoint.



As usual we had a great chef and his assistant prepare a gourmet meal that will go down in RASC NB history. The meat was just right and the garnishes were light and delightful. The cutlery was the finest available.....Oh so good!!!



At the peak of the night it was so dark with so many naked-eye objects that we had a ball showing the campers the awesome views of the constellations and all they contained.



*Jedi Training
Image by Yvon Hachey*

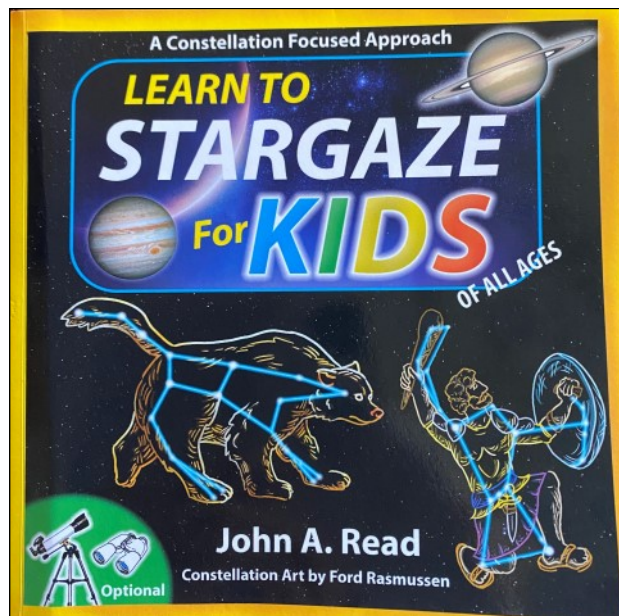
Mount Carleton Provincial Park is must see, family friendly, dark sky and wildlife resource. At the base of the mountains are these beautiful lakes which reflect all that's in the sky. To be there at night with the complete darkness, watching the Milky Way and the stars dancing on the water, is a moment most of us can only fantasize; and the sound of loons calling caps off a most amazing night-sky experience that will keep you coming back for more.



Book Review

Rosanna Armstrong

Of all the seasons summer is the one that often helps the 'child' resurface in someone who hasn't been a child for a long time. In July I happened to catch Chris, Paul and Mike's request for photos of the Moon for another contest. I bolted outside to take a quick shot. My phone is not set up well for night sky photos and its user is not proficient with settings, but the result was enough to enter the contest. To my surprise my name was drawn on the Sunday Night Astronomy Show and the book *Learn To Stargaze for Kids* by John A. Read was the prize.



This book is 'fresh off the press,' copyright 2022. It was published by Stellar Publishing with support of the Province of Nova Scotia through the Department of Communities,

Culture and Heritage. You can read all about John A. Read at www.LearnToStargaze.com. I think this is his sixth book. His wife Jennifer did the interior design of the book and the constellation art is by Ford Rasmussen.

What a great book and, true to its side line, great for kids 'of all ages.' It is a constellation-based approach with telescopes or binoculars being completely optional, absolutely not necessary in any way. The black pages peppered with faint stars contain succinct statements and colorful illustrations which make for easy and visually entertaining reading.

There are seven chapters starting with Becoming a Stargazer, What's That in the Sky, and Movement of the Sky for the first three. Chapter 4 is the biggest, being Learn the Constellations, which is subdivided into six sections: Circumpolar, Seasonal (four) and Southern Hemisphere. At the bottom of each page is an observation checklist allowing one to check off the constellations they have found and record the date. There were also little tidbits of more unusual information like "The Tukano tribe in Brazil sees these stars as an armadillo." (Delphinus)

This is followed by Chapter 5, Astronomical Events, with a chart for Meteor Showers, one of the best I've come across. Chapter 6 is Tour of the Solar System and the final chapter is dedicated to exploring the Moon. The Appendix has *How to* sections for telescopes and binos, a glossary, as well as further reading and websites. The second to last page is all about the RASC Certificate Program, reminding me to unearth my papers and logbook and finally get that checked off.

This book came in very handy on August 20th after a long day of swimming and boating. I came out of the camper to find my granddaughter pointing out some constellations while reading the stories to her brother and friends. Thank you Chris, Paul and Mike!



AstroAnagram

The answer is one astronomical word formed by rearranging the letters of the other word.

Clue: **Dwarf Rover**

a

Answer to previous Astro Anagram created by Ted Dunphy:

PHILAE'S THRUSTER

= ROSETTA TOASTER

English, Arabic, French: What is your astronomy question?

Mary King

I was graciously provided an opportunity to have a RASC NB information booth at the Miramichi Irish Festival in July. No explanation was necessary to explain the presence of RASC NB at the festival to passersby. The Irish landscape has its share of ancient astronomical sites. The most famous, of course, is New Grange in the Boyne Valley, which has a construction date of 5200 years ago (predating Stonehenge and the Pyramids). It is still a tourist attraction today. There are a number of other sites as well, particularly of the stone circle variety.



*The Trilingual Astronomy Booth
Mary King, Hasnaa Alahmad, Mark Trevors
and Yves St-Germain*

Photo submitted

Furthermore, a seafaring coastal people such as the Irish would naturally have relied on the stars and planetary bodies for help with navigation.

The RASC NB booth featured information on the upcoming solar eclipse of 8 April 2024; Miramichi and area is on the path of totality. The booth also featured information on Light Pollution Abatement and a list of recommended astronomy websites and apps, recently updated by RASC NB member Gerry Allain.

Newcomers are looking for opportunities to fit in and help out, plus they bring skills and talents and deep cultural knowledge. Many stars have Arabic names, from Aldebaran (The Follower) to Vega (Plunging [Eagle]).

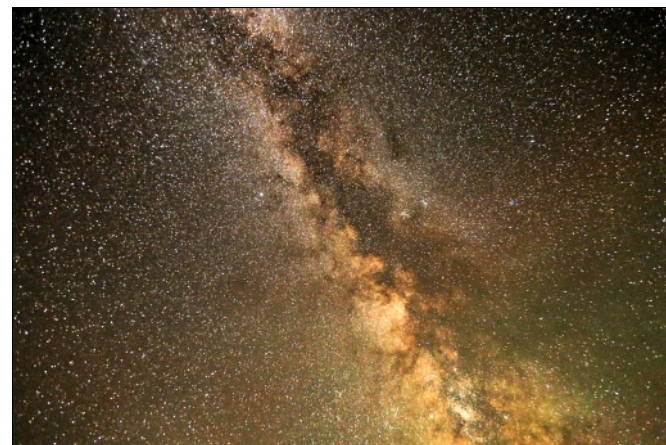
G.T.A. ANSWER



Tiny Scorpius
Magnitude 7th-10th
Size 3.5'

More Deep Sky Images from Mount Carleton DSP

James Cleland



Outer arm of the Milky Way showing Cassiopeia and Perseus with several deep sky objects including the Andromeda Galaxy, Triangulum Galaxy, and the Double cluster.

Both photos are single exposure taken on a Canon 6D at 24 mm, F4, ISO 6400 with a tracked exposure of 60 seconds.



What's Up for Autumn

Curt Nason

The highlight for the months of September to November will be the return of the three most observable planets to the evening sky, with honourable mention for a lunar eclipse.

Sun Solar Cycle 25 continues to impress, with many sunspots and other features for observers with white light filters and H- α telescopes. At 22:04 on September 22 the Sun crosses the equator heading south, beginning our astronomical autumn.

Moon New Moon dates are September 25, October 25, and November 23. This year the interest in the Harvest Moon and the Hunter's Moon will be overshadowed, so to speak, by a total lunar eclipse on the morning of November 8. The partial phase begins at 05:09, followed by totality at 06:16. The Moon sets during totality, between 07:15 and 07:35 across the province, with greatest totality occurring at 06:59.

Mercury concludes a difficult evening apparition with inferior conjunction on September 23, but it quickly reaches greatest elongation for its best morning apparition on October 8. At superior conjunction on November 8, it is pretty much out of sight from late October until December.

Venus is seen best on September mornings as it moves toward superior conjunction on October 22. We are only 95 years from the next Venus Transit.

Mars is now rising before midnight and is brighter than 0 magnitude and wider than 10", allowing for glimpses of its albedo features all season. Currently passing above the Hyades and Aldebaran, it begins retrograding back through the horns of Taurus over November. It is closest to us on the evening of November 30.

Jupiter is at opposition on September 26, retrograding toward the Circlet of Pisces until the last week of November. Double transits of Ganymede and Europa and their shadows will be visible for us on the evening of November 2, with a repeat of the double satellite transit on November 9. Io and Europa team up for a brief double satellite transit on November 17.

Saturn resumes prograde motion atop the chevron of Capricornus in late October, setting around 22:00 by the end of November. The rings are still open wide enough for great viewing.

Uranus will be about 2° east of the eclipsed Moon on November 8, one day before it reaches opposition. We will have to wait until the New Year before we see it occulted.

Neptune reaches opposition on September 23 in northeastern Aquarius.

Comet 2017 K2 PanSTARRS drops through the claws of Scorpius over early September, soon to head out of viewing range for us.

Meteor Showers Several minor showers occur this season that might be worth a try. The Orionids peak with a waning crescent Moon on October 21/22, the South Taurids and North Taurids bracket the full Moon in early November, and the Leonids peak around the third quarter Moon on November 18. The Leonid rates should pick up in a decade when comet 55P/Tempel-Tuttle reaches perihelion in May 2031.

Zodiacal light will be at its best for morning observing in the east for two-week periods beginning September 23 and October 23.



*Zodiacal Light captured by Trudy Almon
over the Bay of Fundy at 06:00 on October 9
last year.*

RASC NB Outreach Events and Handouts

Year	# of Events	People At Events	Live Feed	Youth	Star Finders English	Star Finders French	Moon Guides English	Moon Guides French	Volunteer Hours
2013	102	4119			1602	8	1513	120	
2014	104	4843			1716	241	1378	199	
2015	114	7262			2106	244	2568	156	
2016	219	9498			1984	115	2290	87	988
2017	248	9951	8441		2276	162	2262	131	1937
2018	187	7289	37,922	>1300	1788	170	1635	79	1355
2019	240	7036	46,675	2997	1320	216	1520	213	1950
2020	171	1859	161,688	954	817	22	636	125	1079
2021	131	731	60,240	565	108	0	46	0	1160
2022	100	8213	13,346	7257	400	60	242	105	1114

Types of Outreach Events

Year	Presentation	Night Observing	Day Observing	Youth Group	School Talks	Exhibition	Observ./ Planet'm
2013	24	24	3	12	32	7	0
2014	23	21	20	17	12	8	3
2015	22	33	23	7	15	13	1
2016	31	55	39	19	54	11	10
2017	61	89	22	19	50	6	1
2018	50	80	13	18	20	5	1
2019	73	94	10	22	36	5	0
2020	86	43	5	8	29	0	0
2021	65	48	6	1	11	0	0
2022	42	27	6	3	22	0	0

Outreach Corner Coordinator

We recently received thanks and kudos from the RASC Education and Outreach Coordinator, Samantha Jewett, for our diligence in reporting outreach events. These reports are useful in showing, both for the Society and for our Centre, that we are meeting our mandate as a charity. The reports also provide valuable information when applying for grants.

Several years ago, when I was Chair of the RASC EPO Committee, I saw that only about half of the Centres used the RASC reporting form. Today the number of reports filed since August 2016 was 2255. According to my records for RASC NB, we have filed 850 (covering 1150 events); 38% of the total, and I would bet that the Victoria Centre accounts for a significant portion of the rest. Samantha has started taking steps to improve use of the form.

The other Centres are doing outreach, they are just not using the reporting form on the RASC website. Some Centres who have regular events save the information and include several events in one report.

Thank you for your diligence in performing and reporting outreach. I remind you that the Policy Manual on our website includes directions for completing and submitting the outreach form.

The RASC NB AstroVerse

Yolanda Kippers

I

When looking up into the nights –
Perseus...Andromeda...Pegasus...
All are familiar sights.
The stories you know,
They help with the show;
But maybe...maybe...the story's not right.

II

Let's look at Perseus's variable star.
Algol, the Demon, Medusa – how bizarre.
LOOK and you'll find,
You WON'T go blind,
To gaze at such a beauty from afar.

III

The maid once had very fine tresses;
Then, Poseidon made his beastly transgresses.
Medusa was blamed,
Ultimately shamed;
The sea god got off free, my guess is.

IV

But that's not the end of her woes.
Percy becomes the worst of foes.
He cuts off her head -
Leaves her dead.
He's the Hero – or – so the story goes.

V

Let's continue on with our tale.
So shocking, I hope you won't pale.
Pegasus is born
From the neck that is torn.
With a twin - as big as a whale.*

VI

So, now what do you see in the night?
Perhaps, Perseus is having a fright.
The three angry sisters,**
Are giving him blisters,
As he's stuck holding her head oh-so-tight.

VII

And Andromeda? When she was told
The tale, it left her quite cold;
She tied up in due course,
With that handsome Winged-Horse,
Leaving Perseus out in the cold.

And, now you know...the story's retold.

*In Mythology, Pegasus (a flying horse) and
Chrysaor (a giant and son of Poseidon) sprang fully-
formed from the bleeding neck of Medusa.

**Algol is a triple-star system; Medusa was one of
three Gorgon sisters.

There once was a director vainglorious,
Making named stars in Delphinus notorious.
Rotanev (Beta) – Sualocin (Alpha)
He named for him-selfa.

Read backwards: Nick's become quite victorious.

(When Giuseppe Piazzi's Palermo Star Catalogue
was published in 1814, these two names for stars
in Delphinus appeared mysteriously. Piazzi's mis-
chievous assistant, Niccolo Cacciatore, had trans-
lated his own name to Latin (Nicolaus Venator) and
reversed them to give the star names. In 2016 the
IAU officially approved them as proper names for
those stars.—Ed.)



Emma MacPhee

My 2 year old grandson talking
about planets:

I like Mercury (sounding like
Merkoowee)

the planet Venus

Earth (sounding like OUFF)

Mars (sounding like Marzz)

Jupiter (sounding like Geepeeeter)

and I love carrots...

So much for the rest of the planets.