

NOVA

NEWSLETTER OF THE VANCOUVER CENTRE RASC | VOLUME 2011 ISSUE P | SPECIAL PAUL SYKES LECTURE ISSUE

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About Paul Sykes

Paul Sykes was born in Hummelston, Pennsylvania, USA in 1918. He acquired his interest in astronomy at an early age.

He was an officer in the United States Air Force, served in the Pacific during WWII, attaining the rank of Captain. Following the war, he attended UBC, earning a degree in Physics in 1948. He rejoined the USAF where he worked on the NERVA Project, a nuclear rocket development effort, and rose to the rank of Major. Paul was appointed a lecturer and administrator in Physics at UBC and remained there until retirement in 1983.

A Life Member of RASC, Paul passed away in Oct. 2005 at age 87.

Looking Ahead

Oct. 13: Kaspar von Braun, NASA Exoplanet Science Institute, Caltech: "Transiting: Extrasolar Planets — An introduction and more"

Title image: Jason Rickerby

Paul Sykes and a Reason for Membership in RASC Vancouver

On behalf of the Vancouver Centre of the Royal Astronomical Society of Canada (RASC), and as its President, I would like to welcome you to our annual Paul Sykes Memorial Lecture. I would also like to introduce you to this special edition of NOVA, our Centre's bimonthly newsletter.

We have designed this special newsletter with newcomers to astronomy in mind, and for those who may be new to RASC Vancouver's many public outreach programs. In these pages you will find an article that shows you how to find celestial treasures of autumnal skies and highlights of some of the unique resources and activities that are available to all members of RASC Vancouver.

In this introduction, I'd like to tell you a little bit about Paul Sykes, and the annual public lecture series that bears his name. I'd like to start with a bit of background on the RASC Vancouver Centre, and to encourage you to consider joining our Centre as a member. Among the many reasons to consider membership in Vancouver Centre, one stands out, and that will bring us to back the subject of Paul Sykes.

The Vancouver Centre is one of the

largest of the 28 chapters of the Royal Astronomical Society of Canada. Membership includes an affiliation with the national organization, an annual subscription to *SkyNews* (Canada's magazine of astronomy), and a copy of the annual *Observer's Handbook*, known throughout the world as an essential resource for the dedicated amateur astronomer. All members of our Centre have borrowing privileges from our large collection of telescopes, access to our observatory in Maple Ridge (you can read about both of those programs elsewhere in this NOVA), and the fun of learning more about astronomy and sharing experiences with the many other members who are so passionate about the many wonders of the cosmos!

But I think that the most important reason to consider membership in RASC Vancouver is to become a supporter of our public outreach programs. If you are at the Paul Sykes lecture, take a look at the audience: I'm sure that you will see many young families who have come all the way to the top of Burnaby mountain on a Saturday afternoon so that their children can learn

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Public Outreach



Photos by Aaron Springfield and Leigh Cummings

[See map on page 11]

The autumn is a great time to learn the constellations of the season. Stand outdoors, as far as possible away from city lights. In evening time, by 9 pm it's already quite dark. High overhead and to the east is Cassiopeia, while the constellation Perseus lingers closer to the north-east horizon. Turning south, the great square of Pegasus sits in the middle of the heavens with a smattering of brighter stars to the east marking out Andromeda and Aries. Take a few minutes to mark out the major stars by comparing with a planisphere or star chart. Once you have located just two or three stars, the rest follow.

In frosty Fall, when the dipper seeks the ground, Cassiopeia rises up. The distinct "W" in the sky bears witness to one of the richest parts of the Milky Way. The lady in the chair offers an embarrassment of riches. So many objects are here that only a few can be included in this brief survey.

Leader of Cassiopeia is alpha, a fine yellow or orange star. It's a wide and easy double, with a ninth-magnitude companion within range of a small telescope. The primary has been suspected of variation; not surprising in a ruddy-coloured star.

Eta is also a double star with a reddish companion that is a dwarf. This is one of the simplest ways of spotting a red dwarf without seeking the aid of detailed finder charts. At the other extreme is Phi Cassiopeia, which is perched on the side of the open cluster NGC 457. Since the

cluster is many thousand light years away, phi, if a cluster member, must be one of the most luminous stars known. Yet enough uncertainty in the distances remains to put this statement in doubt.

Andromeda is the chained lady from Greek myth. She is represented by a string of three bright stars immediately west of Perseus and south of Queen Cassiopeia. Each of the three stars is a focus of interest in themselves and not mere place holders in some celestial pattern. Alpha is the north easterly star of the square of Pegasus. The next two are equally spaced in the direction of Perseus and are pale orange in binoculars—especially beta, the middle of the three. This star is a useful finder for the famous Andromeda galaxy, which is, from beta, a little ways towards the direction of Cassiopeia.

Pegasus, with its great square, is one of the most recognizable sky patterns. A large constellation, the flying horse has a wing made up of three third- and one second-magnitude stars. The northern and western of the four is Scheat, a noticeably orange or pale-pink star. The colour stands out more clearly in a small pair of binoculars. In older books, the other northern member of the square is also a star of the horse. But today, this star is given over to Andromeda, and thus the four stars of the square are shared between two constellations. At the far western domain of Pegasus is the star Enif. This is an interesting double, with yellow and

pale purple components, visible in small telescopes.

Perseus is a grand and bright constellation set amid the treasures of the Milky Way. It lies in the northern sky about midway between the star Capella and the constellation of Cassiopeia. Its most discernible feature is the segment of Perseus, a curve of stars that straddle the Milky Way. The leader of the constellation is the bright giant star Mirfak. Going north, the lines of stars merge as though Perseus has a pointed head. A little further in the direction of Cassiopeia is the double cluster, a fine sight in binoculars or a small telescope.

Aries the Ram is the first—and leader—of the Zodiac dozen, but the Ram himself is somewhat of a disappointment. The constellation is a small group of three stars west of the Pleiades and under the striding stars of Andromeda. Those not familiar with the sky may mix up Aries with Triangulum, just to the north. The Ram, in Greek myth, had a golden coat which was the prize sought by Jason and the Argonauts. The fainter of the three stars is gamma, a favourite double star for small telescopes. It was discovered by Robert Hooke in the 1600s and was one of the first doubles discovered with a telescope.

So, the next clear night, get out there and enjoy. ✨

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about the wonders of the cosmos! If the weather cooperates, and you come to SFU after the lecture for our evening star party, take a look around to see the countless young families who have returned after supper so that their kids can experience the wonders of the cosmos! (If the weather does not cooperate, be sure to come to another one of our star parties to see what I'm on about!)

The goals to which the RASC Vancouver aspires when we engage the public at all of our many

community events are reflected in the faces that you will see at every one of these functions: to help to inspire the next generation of scientists, and to enhance the public's understanding and appreciation of science. All of our activities depend on the support of our members and donors, and with your support, together we will do so much more!

Paul Sykes was a life member of RASC Vancouver, and through his generous bequest, his commitment to public outreach continues in many forms, including our annual lecture

in his name.

The Paul Sykes Memorial Lecture has become the signature event in our yearlong program of guest lectures by many kinds of speakers, including world-class scientists doing research in cutting-edge astronomy and space science, amateur astronomers with deep experience and "how to" knowledge, and speakers who come from a wide range of other unique perspectives and backgrounds in astronomy.

This year's Paul Sykes lecturer
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A Starter Library List of Amateur Astronomy Guide Books

by Alan Jones

Good books bring lasting enjoyment. My view is that guides and references need to be easy to use yet should stay useful as you become more familiar with the skies. I'd like to recommend the following starting list I've found remain useful and all are modestly priced. Prices vary between stores and on-line.

If I can only take one book along observing it is: *Sky and Telescopes Pocket Sky Atlas*, Roger W. Sinnott – about \$30. It's beautifully organized; you'll use it for years and years and you'll find many experienced observers have it, are familiar with it and use it.

My favourite beginner book is *Nightwatch*, Terrence Dickinson. It is enthusiastically aimed at someone starting out. It includes good explanations of parts of the sky and a nice set of beginning charts with easy targets in the constellations in the different seasons. Get the spiral version if you can find it. About \$30+. Terrence lives in Ontario.

Sky & Telescope: Binocular Highlights, Gary Seronik. This excellent book has realistic explanations about how to find objects and what to expect to see when you find them. About \$20. Gary lives on Vancouver Island and earns his living writing about astronomy.

Patterns in the Sky: An Introduction to Stargazing, Ken Hewitt-White. A terrific book with explanations about the constellations and their stories along with a pronunciation Gazetteer. A joy to read. Less than \$20. Ken lives in the Fraser Valley.

Beginning Observer's Guide, Leo Enright, RASC. Explains the seasons and how to use sky charts. Lists of beginner's objects. About \$20 plus shipping from RASC. Also, the annual *RASC Observer's Handbook* each year is included in RASC membership. The handbook is full of interesting, timely information and cross references. \$27 plus shipping for non-members.

Another great set of guides are the Finder Charts published by Brent Watson (www.sky-spot.com). These are easy to use, laminated spiral bound charts with telrad sights indicated on simple charts. It makes finding objects fun. Average prices per volume are about \$15–\$20. I have the Messier Objects and the Overlooked Objects. Object trivia includes distance and size, magnitude and NGC number. A very useful guide set.

Software changes rapidly but I'd like to recommend the free program, Stellarium. There are many others available and the list always changes. Ask Google. My current favourite iPhone apps are: MoonPhase, SkyView, PocketUniverse, ICSC, Planets, Distant Suns, Moon Globe and Pocket Earth. SkyView and Stellarium inspired me to find and view Jupiter in the daytime twice this summer, to the amazement of many neighbours and friends. ✨

About RASC

The Vancouver Centre, RASC meets at 7:30 PM in the auditorium of the H.R. MacMillan Space Centre at 1100 Chestnut St., Vancouver, on the second Thursday of every month. Guests are always welcome. In addition, the Centre has an observing site where star parties are regularly scheduled.

Membership is currently \$73.00 per year (\$41.00 for persons under 21 years of age) and can be obtained by writing to the Treasurer at the address above. Annual membership includes the invaluable *Observer's Handbook*, six issues of the RASC Journal and *SkyNews*, and, of course, access to all of the club events and projects.

For more information regarding the Centre and its activities, please contact our P.R. Director.

NOVA, the newsletter of the Vancouver Centre, RASC, is published on odd numbered months. Opinions expressed herein are not necessarily those of the Vancouver Centre.

LIBRARY

The centre has a large library of books, magazines and old NOVAS for your enjoyment at the GMSO. Please take advantage of this club service and visit often to check out the new purchases. Suggestions for future library acquisitions are appreciated.

RASC-VC on the Internet

<http://rasc-vancouver/> or
<http://www.rasc.ca/vancouver>

Details of upcoming meetings and events can be found at our Meetup group at:

<http://astronomy.meetup.com/131/>

H.R. MACMILLAN SPACE CENTRE

The H.R. MacMillan Space Centre Society is a non-profit organization operating the H.R. MacMillan Space Centre and the Gordon M. Southam Observatory. Annual membership (\$30 individual; \$80 family) includes newsletter, discounts on Space Camps, birthday parties, lectures, Museum of Vancouver admission, plus free admission to the Space Centre. Admission includes: multi-media Planetarium productions, interactive demonstrations and hands-on exhibits. For membership, contact Gayle Seaman 604-738-7827 (ext 221) or star@spacecentre.ca

<http://www.spacecentre.ca>

MEMBERSHIP HAS ITS PRIVILEGES!

Membership in the Vancouver Centre entitles you to the use of our telescope loan program. This program gives prospective telescope owners a chance to use an example of the telescope of your dreams or borrow a telescope for the family vacation.

The Vancouver Centre is one of 28 chapters of the Royal Astronomical Society of Canada and membership in our centre brings benefits from the our national body including: The *Observer's Handbook*, regarded by many as the most sought after annual astronomical publications in the world, subscriptions to the National Newsletter and *SkyNews*; Canada's national astronomical magazine. Annual Meetings of the society are held in different cities and are opportunities for Canadian amateur and professional astronomers to share experiences, observing tips

and to exchange ideas on astronomy in general.

Aside from the regular meetings of the Centre, where world-class astronomy speakers and knowledgeable amateurs add to our understanding of the universe, there are monthly 'star parties'—places where we go to observe the night sky. Of course Vancouver suffers from sky glow, but we've found a place near the Boundary Bay Airport that is relatively dark. The Centre owns an observatory in the forests north of Haney and it has an association with an owner of a remotely operated telescope in New Mexico. Members can train to use either of these telescopes for photographing the thousands of galaxies, nebulae and other objects in the night sky. For really dark skies and camaraderie, there are two major star parties in BC: the Merritt Star Quest, held near Merritt, and The Mount Kobau Star Party, held on Mt. Kobau, just west of Osoyoos. The Vancouver Centre also has outreach programs such as today's International Astronomy Day where we set up our telescopes, or hold a 'meteor watch' in urban locations to show 'the locals' what's up. The Centre also has an association with the H.R. MacMillan Space Centre that affords us opportunities to use the Gordon Southam Observatory telescope and other instruments the Space Centre owns. When we do sit down for a meeting, they are a wonderful mix of professional and amateur astronomy content. Being close to a number of institutes of higher learning, we are able to draw from a huge number of professionals at the cutting edge of their fields. The 'amateur' content is a mix of 'fact and fantasy': business and observing.

The RASC-Van has a great benefit for all of our members. We have a Telescope Loaner Program in which any member in good standing can borrow any of the telescopes in the loaner program for free!

There are over a dozen telescopes in the loaner program ranging from small refractor telescopes with alt-azimuth mounts to larger reflector telescopes with computer-aided equatorial mounts. Some of the types of telescopes available include the following:

- Sky-Watcher, Refractor, 102mm – f/10

- Homemade, Reflector, 150mm – f/5
- Omcon, Reflector, 150mm – f/6
- Homemade, Reflector, 200mm – f/6
- Sky-Watcher, Reflector, 200mm – f/5
- Homemade, Reflector, 250mm – f/5.6
- Sky-Watcher, Reflector, 250mm – f/5
- Meade ETX-90 w/Autostar, 96mm – f/13.5

Each telescope includes at least one eyepiece, and most have two eyepieces and a 2X Barlow lens.

All are portable and break down for easy transport. The computer-aided telescopes are only available for members who have taken the short instructional course on their proper use.

All the telescopes are stored in the observatory (GMSO) at the H.R. MacMillan Space Centre (Planetarium). To borrow one of the telescopes, meet the Director of Telescopes in the GMSO after every monthly members' meeting. There's a short form to fill out, and the telescope is yours to use and enjoy for an entire month, until the next monthly members' meeting. ✨



Photos by Steve Coleopy

Part 1 – The connection to crime and light pollution

Fear of increased crime is the most significant concern expressed by people when asked about reducing light pollution. It is commonly believed that nighttime lighting reduces crime, yet studies of crime conclude primarily that only our fear of crime is reduced. Although there is an overwhelming view that all-night lighting prevents crime, crime data do not show a strong relationship between lighting and crime rate.

The belief that lighting reduces crime is widely held and this and

related issues have been examined in many places over the past few decades with some surprising results.

Numerous investigations of the supposed relationship of light and crime have been undertaken are listed at <http://amper.ped.muni.cz/light/crime/OLCpt2.htm> and <http://amper.ped.muni.cz/light/ctstarwchr/LiteLynx.htm#crime>.

A test in West Sussex, UK showed crime went up in lit areas. In certain test areas, all-night lighting was installed; other areas were kept as control areas. West Sussex Police monitored the crime patterns for comparison with the previous year in

both test and control areas and polled residents about their perceptions and the effects of the all-night lighting.

Polling results confirmed people thought lighting prevents crime and most residents felt safer after the all-night lights were installed. Crime statistics, though, showed a 55% increase in crime in the test areas as compared to the control areas and to the county as a whole! West Sussex has subsequently decided against all-night lighting.

And there's another surprise: Police report that such darkness is often safer. That's partly because

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definitely falls into the latter category! He is Jon Lomberg, an internationally recognized astronomy artist based in Hawaii, who is being co-hosted in Vancouver by the Simon Fraser University Faculty of Science, and the RASC Vancouver. Mr. Lomberg's work has included exhibits at major museums in the US and Canada, commissions by NASA for scientific artwork including for many spacecraft missions, and work in many other forms of science communication. Mr. Lomberg also had a long and fruitful collaboration with the well-known astronomer, writer, and educator Carl Sagan, including his role as Chief Artist for Sagan's acclaimed series, *Cosmos*. In fact, Mr. Lomberg's Paul Sykes lecture is entitled "My work with Carl Sagan."

I'd like to conclude this introduction to our special NOVA

with a brief biography of Paul Sykes. I hope that you will keep Paul's legacy in mind during the lecture, and whenever you might have occasion to reflect back on what I have no doubt will be a great presentation by Jon Lomberg.

Paul Sykes was born in Hummelston, Pennsylvania USA in 1918. He acquired his interest in astronomy at an early age. During his teens, he published his own monthly astronomical column and gave at least one lecture.

He was an officer in the United States Air Force, served in the Pacific during WWII attaining the rank of Captain. He was awarded a Presidential Unit Citation, the U.S. Air Medal, the Oak Leaf and Cluster and the Bronze Star. Following the war, he attended UBC earning a degree in Physics in 1948. He rejoined the United States Air Force and attended the Oak Ridge School

of Reactor Technology, studying nuclear physics. He worked on the NERVA Project, a nuclear rocket development effort, and rose to the rank of Major.

Paul was appointed a lecturer and administrator in Physics at UBC and remained there until retirement in 1983. Paul actively pursued his interest in astronomy, attending conferences and joining the R.A.S.C., where he became a Life Member.

Paul Sykes passed away in October 2005 at the age of 87 and left the Vancouver Centre a generous gift, the proceeds of which are used in many of the Centre's public functions, including the annual lecture in his name. ★

Dr. Howard Trottier
President, Vancouver Centre of the RASC
Professor of Physics, SFU

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neighbours soon learn to alert police if they see any lights on in a building. There's even less graffiti because it's usually lighted walls that attract the spray-can vandals, not dark ones.

The San Diego police have gone on record indicating they see no real influence of lighting source on crime levels. Commonly, people's perception about what lowers the risk of crime is not based the facts of the situation.

Vandalism and graffiti have been successfully reduced in many American schools with the Dark Campus Policy that was begun in San Antonio in the 1970s. Vandalism and graffiti—and the associated cost of repairs—dropped immediately when “security” lights were removed or turned off.

The City of Calgary Police Service has also concluded that when and where crimes occur are not related to the amount of darkness available. Calgary crime statistics show that most break-ins occur when a property is unoccupied (homes during the day; businesses at night, despite “security” lights). Assaults generally occur between individuals who know each other and they usually involve drugs, alcohol, or past differences.

Many studies in the United Kingdom and the United States have attempted to understand the relationship between lighting and crime. A comprehensive study was recently concluded by the US National Institute of Justice (Preventing Crime: What Works, What Doesn't, What's Promising, A Report To The United States

Congress, 1997). It used data from existing reports, primarily from The United States and The United Kingdom. Social and physical factors and the full spectrum of crimes were considered. The study was critical of most studies because they tend to have poor experimental design. However, the overall conclusion about lighting is: “We may speculate that lighting is effective in some places, ineffective in others and counter productive in others. The problematic relationship between lighting and crime increases when one considers that offenders need lighting to detect potential targets and low-risk situations.”

Several British studies have followed proper scientific methodology. A comprehensive study of 100,000 crimes in an inner London area with a high crime rate sought to determine whether new street lighting reduced crime. 3500 new streetlights were installed. While residents felt safer, the principal conclusion was “...that no evidence could be found to support the hypothesis that improved street lighting reduces reported crime.”

And what about the criminal's perspective? The Home Office Crime Prevention Unit in London interviewed over 300 experienced burglars and robbers about what influenced their decision to commit a crime. Opportunity, proximity and “the excitement of risk taking” were the reasons given. Even the presence of neighbours and the possibility of intervention by passers-by were routinely considered in their decisions. However, the presence of potential witnesses wasn't a deterrent

since the perpetrators knew witnesses would commonly take no notice or, if they did, no action. It was clear, too, that offenders were not necessarily influenced by lighting conditions. The only truly powerful deterrents cited were signs of occupancy and, to a lesser extent, dogs and alarms.

“Security” Lighting

Lighting supposedly militates against crime because it enhances surveillance. Lighting that draws attention to would-be crimes might be a deterrent, as long as there are potential witnesses. Motion-sensor activated lights, with a short duration, will do this much better than lights that are left on constantly (this is the same logic as the common auto alarm—it turns on to call our attention to a potential problem and to startle the would-be criminal). However, lighting, accompanied by public vigilance (i.e. looking out for your neighbours) and greater police presence may be more effective.

Concern for property and personal safety is a natural outcome of the society that we live in. While crime rates are generally dropping, we do need to be aware of the possibility that “it could happen to me.” For many people at night, the fear for personal safety is entwined with another fear, that of darkness. These two separate concerns are so often treated as a single item, that it can be tough to imagine them apart. The fear of darkness is something we have lived with since we were small children wondering what or who was lurking under the bed or in the closet. This irrational fear

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of the dark distorts our legitimate concerns about personal safety—to the point that a brighter light is falsely viewed as making an area safer than a dimmer one could.

A whole industry has sprung up around “security” lighting, feeding on the public’s fear of darkness, foisting poorly designed, glare-prone, overly bright light fixtures on a public that has blended its justifiable concern for property and personal safety with a misplaced fear of darkness. Feelings about darkness are so entrenched that the words “security lighting” are accepted unquestionably as a positive description of these light fixtures. Yet, think about the very similar “security blanket.” This conjures up images of youngsters with a misplaced faith in the protective properties of their favourite “blanky” or Charles Schulz’s famous Peanuts character, Linus, and his indispensable fabric.

Remember laughing at the trouble Linus’ “security blanket” got him into with the rambunctious Snoopy? Charles Schulz loved to remind us of the difference between belief and actuality with these antics.

“Security” lighting is primarily about making the purchasers feel better—not necessarily improving their odds with criminals. For these reasons, the design of “security” lights involves the use of glaring bulbs—people need to see the light bulb in order for it to make them feel safer. Not BE safer, but FEEL safer. If the bulb was hidden and unobtrusive (as it would be in a responsibly-designed light fixture) and of a much lower brightness than what are provided with most “security” lights, it would provide better illumination. It would do so by not forcing our pupils to constrict and by not creating strong contrasts in the amount of light in one part of the yard to another. Responsible illumination

can enhance surveillance—which does have an impact on crime and safety. Light can have an impact on crime only if someone is likely to be watching. A report by the City of Calgary Police Service cautions that too bright of a light may deter surveillance and actually aid criminal activity.

So, “security” lights do not replace human vigilance. “Security” lights can create a false sense of security, and poorly designed “security” lights can obscure criminal activity, both of which may ultimately be detrimental to a person’s safety.

If you are interested in contributing to the fight against light pollution, or know someone who you think should, please let me know. I can be reached at 604 345 0303 or via email at meburne@telus.net.

Next issue: Part 2 – Lighting for Safety *

Mark Eburne, LPA Chair, RASC Vancouver



Regarding the Big Dipper
Observing the night skies
from Pitt Lake

Photo by Mark Eburne

Greetings from the Antony Overton Memorial Observatory, our little observatory in the Art Knapp Research Forest (UBC) in Maple Ridge. Having lived almost my entire life in the Lower Mainland, I am quite used to our fickle weather (here at the west coast, Astronomer and Optimist are synonyms). This year has tested even my patience. I drove up to the observatory this morning to check things out after a strong wind blew overnight and just as I arrived, it started to rain.

I did a walk about the clearing and then around the building. At the building corner closest to our outdoor pad, I discovered that Yogi had left a calling card (I liked the berry seed decor). By its freshness, I would say he had watched me drive up. I took another walk around to see if I could spot him but had no luck. Near the forest border, I marked my territory to let him know who is boss and then went in to check out the office.

Before entering, I did notice all the fine work Mark Eburne had accomplished the prior weekend cleaning up the outside area. He weed-whacked the heck out of the shrubbery surrounding the building as well as pulling out a few of the faster growing trees that had taken root too close to the building. My school teachers were being gentle when they described our local

vegetation as “temperate” rainforest. Even in our temperate climate, trees grow like they’re in the Amazon. Without Mark’s continuing efforts, it would not be long before we would have to launch an expedition to re-discover RASC’s lost observatory.

Despite the inclement weather we have had this year, we have still managed to get in some very good nights at the observatory. Mark and myself have been working at making the observatory more versatile for our members as well as more available to interested members of the public. Oleg Mazurenko has

are accounts of several nights with Rohit and Oleg as well as my last night up there on August 27 when we had Mark Speller, April, Terry, Oleg and myself. Mark and April were busy with binocular-walking through the night sky while Terry was trying out his new telescope. Oleg was imaging through the main scope in the dome. I was also using my binoculars that night instead of a telescope. We spotted a fair number of meteors that night as well. The night was warm, the sky was dark and clear, the mosquitoes were quite well-behaved and fun was had by all. That is what I call a good night observing.

Mark and I are planning to hold a work party on October 15th so if any members would like to spend some time in the forest (rain or shine) helping us to knock down and clear a few trees that are blocking our south-east view from the pad as well as cleaning up the building, you will be

more than welcome. We will have more details as the date approaches.

Mark and I will continue our work at the observatory over the winter. We hope that members and guests will join us for some dark, star-filled nights in the forest. We also hope to have a larger public event before the winter weather arrives. Feel free to email me at: aomo.rascvancouver@gmail.com *



spent a few evenings with me at the observatory using his own camera to do imaging, both on the outside pad as well as through the main telescope. Rohit Grover has also spent a few evenings with me over the summer working on his Messier check-off list.

I have been trying to keep an up-to-date log on our website to let people know what we have been up to, however I always seem to update in spurts. Yet to be posted

Members' Gallery



Autumn Skies: Aries the Ram and Other Sights

See the article on page 3 for a detailed guide to this map.

(chart generated using Stellarium by Howard Trotter)

VANCOUVER TELESCOPE CENTRE
Serving the Astronomers of Vancouver and British Columbia since 2004

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