

FROM

HALIFAX CENTRE R.A.S.C. +
1747 SUMMER ST.
HALIFAX, N.S.

TO

ROYAL ASTRONOMICAL SOCIETY,
252 COLLEGE ST.,
TORONTO, ONTARIO.



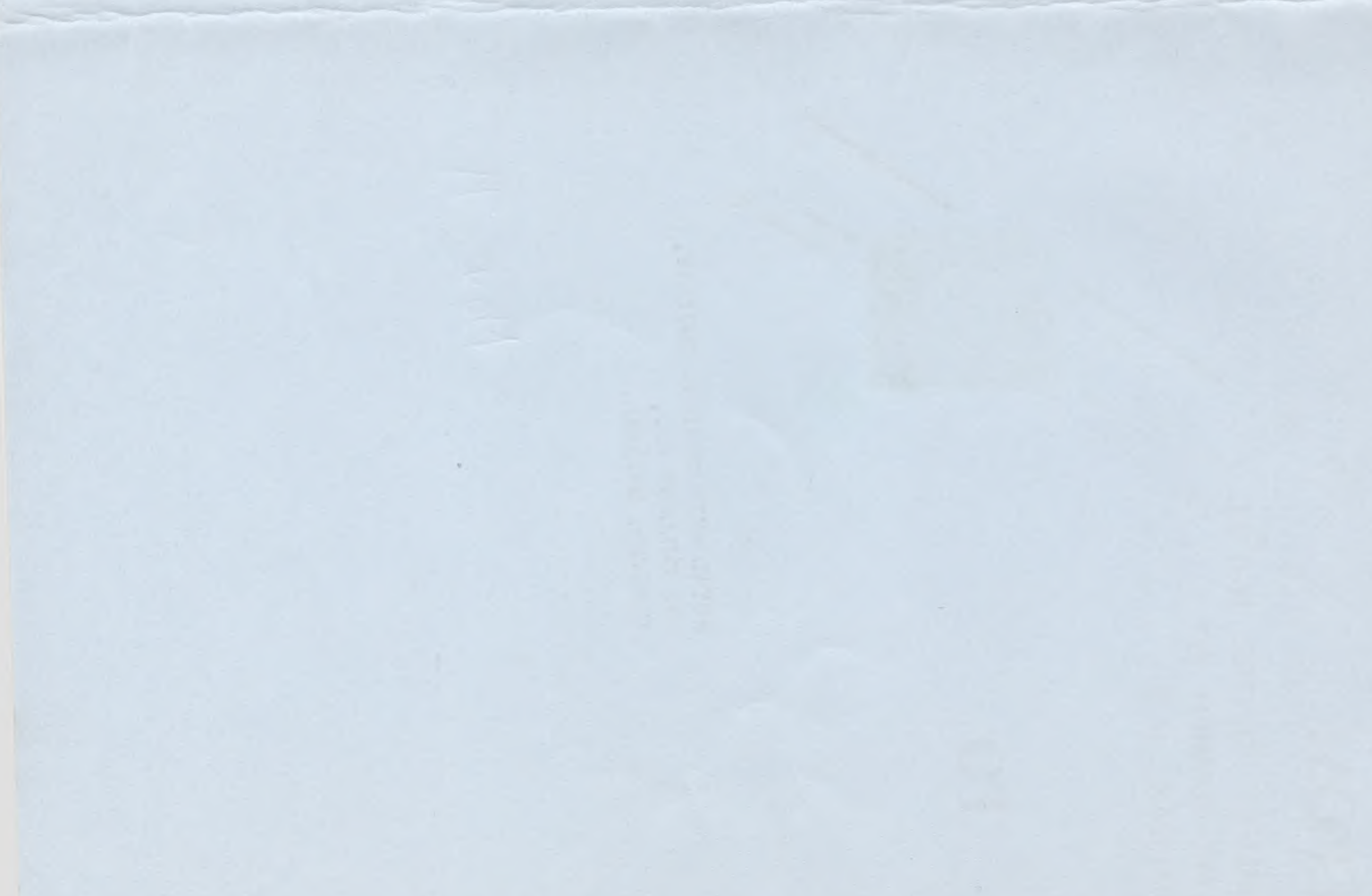
Nov 71

NOVA NOTES



44° 38' N
63° 35' W

HALIFAX
CENTRE



EDITORIAL

This is issue 1 of volume 2 of Nova Notes. Two meetings of the Halifax Centre of RASC (September and October) and one star night have been held so far this year. I wish to apologize to those members who missed these meetings due to lack of notification. We will keep you better informed in future.

The next meeting to be held on November 19th is important because a new executive will be elected. If you have ideas on activities or special interests, this is the time to let the new executive know. Please invite your friends and/or members of the old Halifax Centre to attend.

Last year the Halifax Centre was re-activated after several years of inactivity. The meetings were popular and well attended due in large part to the excellence of our guest speakers. The format of last year's meetings will be continued, that is, a short business meeting, a guest speaker, film and/or slides and coffee at which time books can be borrowed from our library (started last year) and members can meet each other.

Last year, RASC-H member participation was virtually restricted to attendance at meetings. No active observing programs were started and, although several lens grinding kits were purchased by the Society, none were ground. As can be seen from the report of the first meeting, the report on the first star night and the report on the lens grinding activities, this situation is now changed.

We are looking forward to a productive year culminating, we hope, in fine weather on July 10, when a total eclipse of the sun will be visible from P.E.I. and parts of Nova Scotia.

J. M. S.

NOTICE OF MEETING

Place: Nova Scotia Museum

Time: 8 o'clock

Date: November 19, 1971.

Speaker: MARY KING

Election of new officers.

On May 15, of this year, the Museum held a "Museum-go-Round". At that time Mrs. Cora Greenaway toured the Museum and wrote the following article which was carried on the C.B.C. We are most grateful to Mrs. Greenaway for the interest which she showed, particularly in our Exhibit.

THE LIVE MUSEUM.

By Cora Greenaway.

There are many complaints against our modern society and sometimes it almost seems as if we can't do anything right. However, there is one shining example of a vast improvement over the good old days and that is the concept of a Museum. The musty museum overcrowded with poorly lighted exhibits complete with unreadable, unintelligible identification cards is out. Last Saturday, I went to the "Museum-go-round", a name not coined by me but thought up by some one at the Nova Scotia Museum. This is a day when children and adults are invited to take part in one or more different activities. Under expert guidance one can be instructed in the old pioneer crafts such as spinning and weaving or making rope mats or mounting seaweed or just watching the live exhibits. Most of the crafts are old, I found the interesting part that none of them demanded expensive equipment. To spin wool you do need a spinning wheel, although a distaff will do the trick, but weaving can be done on a simple makeshift loom with cardboard, pins and popsicle stick. One section was set up with microscopes where life in a drop of water was examined. The nine and ten year olds who were attending this session, were listening with rapt attention to the instructions on properly using a microscope.

However, there was one part that was ultra modern, the astronomy section. The guides here were members of the Royal Astronomical Society, local branch. As I came in about a dozen youngsters were watching the slides of galaxies and nebulae. Next they moved to the small planetarium. I kept very still as it was obvious that these space-age children knew much more about space than I do. Then we turned our attention to the telescope, you notice I said we. You see by this time, I had become so engrossed I did not want to miss anything. In closing we saw how to grind a lens, a fascinating procedure. You start out with two discs of about one inch thick and after long and arduous grinding, and this is not exaggeration, it takes at least several months to do this - you end up with a convex and a concave disc. They are a fit, like a mold. You discard the convex and your concave disc is your lens. The telescope on display was home made and a jolly good one it is. I know because it was through this product I saw the moon for the first time with craters and valleys and ridges, just like the photographs. It was a bright afternoon in late winter when we visited our friends with the telescope. Outside the full moon hung like a styrofoam ball in a blue sky. Would

you like to see the moon through the new telescope? asked my host. Booted and overcoated, snow was still on the ground, we went out. I fixed my eye to the telescope and there she was. Not smooth, not like Edam cheese, she actually did have round craters and shadows where the valleys were, and mountain ridges. It was a revelation! This moon that had seemed so far, was not so distant any more. I thought of Mrs. Armstrong, who in speaking of her husband, had said that this trip to the moon was the ultimate for him, it was what he had been working for for years and now he was there. I am sure he is very happy she said. At the time I could not quite see that the expression "happy" fitted the case, but now I do. That old moon is a thing of beauty.

As it was broad daylight, I did not discern many stars, but I am told that the clusters of stars are brighter than all the Crown jewels, I do believe it after seeing the slides of the North American nebula. The definition of a nebula is that it is a birth place of stars. Just think, the place where stars are born, the nursery of those shiny candles. No wonder people have been fascinated by the stars for so long. It is like having a whole treasure house up there to look at, to enjoy and to probe. Ancient people gathered their knowledge through observation, they did not have the scientific know how to back it up. They were patient observers and from the accumulated facts they were able to fashion a calendar. The Egyptians were skilled in astronomy. For example, the internal passages of the pyramids are inclined to point at the pole star of the period, a feat only possible with the aid of sighting instruments. I wonder why they felt it was important to make the roadways in their funeral tombs in line with the heavenly bodies. The Babylonians studied the stars with an added purpose in mind - astrology the predicting of people's future and destiny. So did the Chinese. This could lead to unfortunate occurrences. The Chinese astronomers Hi and Ho had not foreseen an eclipse of the Sun. The frightening event so upset the Emperor, he had the poor astronomers beheaded. This is quite understandable, an eclipse of the sun is eerie, it has a fey quality. You remember the eclipse last year when the world became dark and still at three in the afternoon. Not even a bird stirred. I was glad when it was over and I knew what it was all about. The Chinese Emperor did not.'

But to return to our astronomy section. The audience ranged in age from nine to thirteen, I would guess. They were absorbed and knowledgeable. The conquest of the moon has had far reaching effects. I am sure ten or fifteen years ago the same age group would not have been able to follow the explanations of the amateur astronomer. This astronomical society is a dedicated group. They range in age from students to the honorary member Father Burke Gaffney. Perhaps of necessity to cut down on expenses, they are enthusiastic do-it-yourselfers. They build telescopes, and develop their picture taking techniques. One member has a speciality, he looks for comets. Comets are rather rare visitors on the skyline and so far he has had no luck, but nothing daunted he continues his search of the heavens. "It really does not matter" he says, it is so peaceful watching the sky at night". Perhaps it is the search rather than actually spotting one, that gives him the greatest satisfaction. What is attractive about the endeavour and makes one think, is the philosophic approach to the ultimate outcome of the quest.

We live in such an unquiet world that it seems to me it is desirable to cultivate the quiet pastimes. Angling is a contemplative sport, addicts like Izaak Walton did not care about the catch, they liked to be at one with nature. Star gazers are similar, they are not pursuing a fixed goal, they are exploring the universe. Time is not a first consideration, they depend too much on the whims of the weather for time to matter.

A like attitude was noticeable in the Museum on Saturday. The children pursued their hobbies but with better achievements and more satisfaction to themselves. Despite the number of children milling around, it was quiet, they could concentrate on the projects. If we are moving towards a four day workweek, it is well that a young generation learns to develop mental and physical skills so that they will really enjoy their bonanza of freedom.

On the 26th of September at 2300 hr. there was an auroral display visible over Dartmouth. It consisted of pale white curtains that moved rapidly back and forth across the sky.

JMS.

A brief report on the September and October meetings.

September 24th

The members of the executive felt it was important to start this year by starting some active viewing programs. Consequently the first meeting was devoted to establishing the following activity groups.

1. Variable stars. This group is headed by Walter Zukauskas who is an experienced variable star observer and is at present writing a masters thesis on Variable stars while at Dalhousie University.
2. Occultations. Mary King will head this activity group. Mary receives computerized predictions from England for many occultations, calculated for her house at Ferguson's Cove. Mary is well known for her work in astronomy in the Halifax Dartmouth area and you may have seen an article about her in a recent Mail Star.
3. Lunar, solar and planetary. Roy Humphrey will head this group. Roy completed a 6" reflecting newtonian last year and has been keenly observing and photographing through it ever since.
4. Sky Lore. This is a group needing a leader with some knowledge of constellations and the position of interesting stellar and planetary objects. It is a learning group from which many could benefit.
5. Messier club Everyone can belong to this. One just keeps track of all the messier objects seen, with a view to seeing them all.
6. Lens grinding. The Nova Scotia Museum has made room available in one of the activity rooms every Saturday morning at 10:30.

October 22nd.

Dr. Mitchell of St. Mary's University spoke to us about the new observatory nearing completion there. The telescope is a 16" F11 cassegrain which, it is expected, will be installed on November 29th. Dr. Mitchell said time would be made available for public viewing with the telescope, probably early in the new year, which is exciting news for us.

Two National Film Board of Canada movies were also shown, Auroral Rocket and Atomic Energy in Canada.

Solar Eclipse.

Next summer a total eclipse of the sun will be visible in PEI and certain parts of N.S. It is hoped many members will be able to participate in this eclipse. Mr. Earl MacDonald has property near Caribou N.S. from which members may view the eclipse. Mr. Verner Coles of North Milton, PEI will also allow members to view the eclipse from his property.

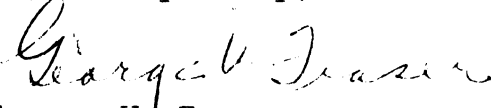
The following letter was received from the Department of Tourist Development, P.E.I.

Dear Sir:

As you probably know, a total solar eclipse will occur over eastern Canada on July 10, 1972 and Prince Edward Island is a prime area from which to view this phenomenon. Most of the land crossed by the umbral shadow is sparsely inhabited. However, the path of the eclipse crosses right through the central and eastern part of Prince Edward Island close to resort areas, urban centers and villages. The maximum duration of totality will be 155.6 seconds.

We are sure that you or some of your associates might possibly consider combining a holiday trip to Prince Edward Island in the beautiful month of July to enjoy some of our vacation attractions, particularly the beaches, and at the same time study the eclipse. We would be happy to help you with any hotel reservations or other arrangements you may consider necessary. Please let us know your wishes in this regard and we will co-operate in every way possible.

Yours very truly,


George V. Fraser
Deputy Minister

The following is a report on our first Star Night, written by one 12 year old Craig MacDonald. We hope to make the Star Night a regular monthly activity, two weeks after our regular meeting.

STAR NIGHT. by Craig MacDonald.

Star Night Oct. 1, 1971 9:30 p.m. - our small army of about 15 people marched up the hill at Connaught Battery and mounted our guns (telescopes) to the sky. For nearly 3 hours we viewed the moon, Mars, Jupiter (for a time) Saturn and all other stars at random and Roy Humphrey got a binary star for us in his big six inch. It was a fair turn out - the 15 people - or as many as I remember out of 15 or so were Mr. and Mrs. Humphrey who brought a 6 inch reflector (home made) a 2 1/2 inch refractor and a pair of binoculars. Mr. and Mrs. Sheehan brought the Club's 2 1/2 inch refractor, and a pair of binoculars. There were about 6 or 7 other people there whose names I am afraid I can't remember. Two boys were in St. Mary's University, two other boys were in Grade eleven, at Queen Elizabeth High School. While yours truly and my dad E. W. MacDonald took the club's 3" brass telescope and my little 1 1/2 inch telescope which is not worth 2 cents anymore. Right now we are building an eight inch reflector. At about 10:05 it was beginning to cloud over very quickly with a thick sheet of fog and cloud, so we decided we would all call it quits - we did and we went down to Mary's house for coffee and cookies. Just as we got in the door the phone rang, it was John Shaw, he said he was sorry he could not make it down, he had to work. So while everybody else was drinking coffee and eating cookies and literally having a ball, poor old John had to slave behind a desk. Just before we left Mary King saw Saturn over George's Island and picked it up in her 3 1/2 inch Questar which she also brought up to the observing platform - which was really just an old house foundation. So everybody left happily.

Star Night Number I was a big success.

Newsletter printed, thanks to the goodwill of the

Nova Scotia Museum.

Lens grinding.

For the last six Saturday mornings the harsh rasping sounds of the initial stages of mirrors being ground has issued forth from the Nova Scotia Museum, between 10:30 and 1 o'clock. The Museum supplies us with work space and mirror supports next to a sink and also supplies storage space for our equipment.

Two 20 cm (8") mirrors are being ground by Earl MacDonald and John Shaw and one 15 cm (6") by Craig MacDonald. By the time you read this the rough grinding should be finished and the smoothing started. Earl is already talking about a 32 cm (12 1/2) mirror he would like to make.

Several people have shown interest in the possibility of making a Maksutov telescope. Dr. Maurice Laycock of the Atlantic Regional Laboratory of the National Research Council is hoping to start on a 20 cm Maksutov. His interest in Maksutovs was aroused after reading some literature borrowed from Anthony Lock, a PhD Candidate in Biology at Dal. who has for many years collected news letters of the Maksutov Club. Chris Purcell has also shown interest in Maksutovs. Chris ground a 20 cm. mirror and is now in the process of preparing a mount for it in Halifax after leaving its pier in Lunenburg. Paul Davison has come to the Museum on several Saturdays. He plans to build an equatorial mount so he can do some astrophotography before constructing a telescope.

REPORTING ON OBSERVATIONS

METEOROID: A small object entering the earth's atmosphere which dissipates its energy in a brief blaze.

METEOR: The streak of light of a particle travelling in the atmosphere - a shooting star.

METEORITE: A meteoroid which survives to fall to the ground.

FIREBALL: A meteor as bright as Jupiter or Venus.

BOLIDE: A fireball that appears to explode.

1. HEIGHT above the horizon.
2. TIME (a) of sighting (b) duration.
3. DIRECTION and ANGLE with the horizon.
4. DATE of sighting.
5. LOCATION - coordinates or geographical references (note landmarks or draw a map.)
6. TYPE - Fireball, Bolide etc.
7. SIZE and SHAPE - in relation to the moon.
8. OCCURANCE OF BURSTS OR FLARES - number and position along the path.
9. SOUNDS (cracking, hissing, explosive) and the time intervale between sighting the object and hearing the sound.
10. LUMINOSITY - brightness compared to a planet or the moon and the occurance of nearby shadows, if any.
11. COLOR Distinguish between the color of the object and any persistant train after its passing.
12. SKY CONDITION - clear, cloudy, haze etc.

