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MENSIS MIRABILIS

March has indeed been a great month for the Edmonton Centre. We seemed to feel the first stirrings of new life at our Council Meeting on March 4, when we were discussing plans for a new Observatory Programme for the public and the need for making preparations for the opening of the new planetarium. At this same meeting Earl Milton and Ian McLennan dropped in with a fragment of the great meteorite which had dropped at Bruderheim that morning. Further, we learned that our Dominion President, Dr. McKellar, was visiting Edmonton on the 31st. and would be glad to address the Society. Then, of course, on top of all this, there was the lunar eclipse which we shared with the rest of the Americas. Altogether, there has been much not only to stimulate the imagination but also to impress upon us our new opportunities and consequent responsibility as interpreters of astronomy to an expectant public.

The Bruderheim Meteorite --
E. Milton

Early on the morning of March 4 - at 1.06, to be exact - residents of Edmonton and district were startled by a brilliant fireball which exploded yielding a blinding -20 magnitude flash and a thunder-like rumbling which lasted close to 20 seconds. By mid-afternoon of the same day reports reached the Centre telling of the finding of a six-pound fragment of the meteorite six miles north of Bruderheim. Within twenty-four hours, another 150 pounds of the object had been located, mainly due to the effort of Stan Walker and Ty Balacko of Fort Saskatchewan. The fragments were located over a four-section area. Walker and Balacko did an admirable job of photographing the fragments in situ and in making a scale drawing of the particle distribution over the area of the fall. In the ensuing negotiations the Centre acted as a coordinating group between the University and the Canadian Government Surveys. Because of the excellent cooperation achieved, the Geology Department of the University of Alberta is now in possession of close to 300 pounds of the meteorite.

The meteorite pieces are story, with a black oxidation crust over all exposed surfaces. Preliminary analysis shows the fragments to contain considerable quantities of magnetic substances. Complete analysis of the object and its trajectory through the atmosphere will be made at the University.

At the request of Walker and Balacko, who sold their fragments to the University, one of the larger and finer pieces, weighing 67 pounds, is slated for permanent exhibition in the new Queen Elizabeth Planetarium. Other pieces of the meteorite will be loaned out to various Alberta institutions and to leading centres throughout the world. Such a recovery is a "one-in-a-million" occurrence, and both the University and the Centre owe a hearty vote of thanks to those people who found fragments and so readily turned them over to the proper authorities. To the members of the press, radio, and T.V., we owe another vote of thanks for their "tasteful" handling of the publicity concerning the fall and recovered fragments. A special vote of thanks to Ab Douglas, Julian Kiniski, and Ian McLennan of CFRN for their special help, and to Stan Walker and Ty Balacko for their excellent cooperation in the recovery of this fall.

SPEAKER FOR APRIL

Don Rosenfield will address the April 8 meeting, at 8:15 p.m., Room 142, Arts Building, on the subject "Astronomy and Philately"

There will also be important business to discuss; it is hoped that we may have a record attendance now that the bitter weather has finally passed.

Don and Christine - One of the problems of our centre is to replace active and valued members who from circumstances of necessity drop from our circle from time to time. Fortunately many are able to retain their membership and affiliation with our group.

I refer at this time to a young couple who joined the Edmonton Centre 3 years ago, Donald and Christine Rosenfield. They brought with them an excellent background in astronomy. Don has a practical knowledge of telescopes, having built several of them. Christine is now completing her Doctor's degree at the University of Alberta. They have been enthusiastic members of our Centre. It has been our privilege to have them with us. It has been a better association because they have been among us. We wish to congratulate Christine on completing her degree, and wish them both every success in whatever field of endeavor they may follow.

Don's 10" As an example of the sort of telescope-making mentioned above by the President, we pass on this report recently received from Don:

Perhaps an interesting comparison between telescopes would be to show how they perform at various magnifications on a test object. Such an object in the spring skies is the cluster NGC 2158, which is within the field of view with low power of M35 in Gemini. Its magnitude is 12.5. Quoting from Walter Scott Houston, "It is generally too difficult for apertures of less than five inches, and I have received only one report of its being seen in a 4-inch. In the 10-inch at 90X it has a soft sheen, totally unlike the Messier object, and resembles a diffuse nebula or a comet. Leonard Abbey using a 16-inch at 300X resolves this faint cluster into stars."

Using my 10" f.4 at 128X, I also resolved the "nebula" into stars. It is reasonable to assume that a short focus telescope, because it concentrates

the light to a greater degree at the focus, will perform better on clusters, nebulae, and galaxies - I mean visually; I am not sure that this would hold in long exposure photographs. In a direct one to one observation of M3 in Canes Venatici this scope outperformed what is considered to be the best refracting visual telescope in the world, the Alvan Clark 18" instrument at Dearborn Observatory in Illinois. This was the scope that discovered the companion to Sirius. My 10" has also shown M13 better than the 40" refractor at Yerkes.

President's Message Over the past month the Edmonton Centre has endeavoured to re-establish the operation of the Observatory. To date we have derived a list of members who have volunteered to their turn at accommodating the public regular nights. The greater part of the group are amateurs at handling the instruments. However, the group is in charge of six leaders each of whom is an experienced operator, responsible for instructing those in his charge. This arrangement is temporary and more permanent plans will have to be worked out. Personally, I think an observatory convenor will have to be appointed to direct the whole project. In the meantime, the leaders should be responsible for arranging with his group for an appointment at the observatory to familiarize them with its operation. The group and sub-groups are as indicated below. If you are interested in joining the group, please sign the form below and advise one of the leaders accordingly:

1. Garry Marliss - A. Stockwell, H. A. McGregor
2. Franklin Loehde - Walter Nacuk, Carla Zowtiak
3. Robert Allin - David Skelton, Wm. Polomark
4. John Mandrusiak - J. Harrington, Laurie Sterling
5. Don Rosenfield - Phil Forcade, Frank Page
6. David Marvin - V.C. William, A. Stansfield.

The more members who offer their assistance, the easier it will be for each of us to take our turn.

At the same time we are in the process of establishing a committee interested in Planetarium work. The committee to date is as listed on page four, derived at our special meeting held on the occasion of our president's (Dr. McKellar's) visit on March 31. We know there are others keenly willing to assist in this work. Please inform us accordingly on the form on page four. There is some urgency here so please hand it to the secretary at the next meeting or else mail it. You may note that the executive was authorized to name a committee to operate in the name of the Centre in any capacity we may be called upon to serve. However, it will be of great assistance to the executive to have a list of members who wish to serve in Planetarium work.

You may recollect that the Planetarium was built after considerable representation on our part to the City of Edmonton. We therefore, have an obligation to do our share in its operation.

The Planetarium group to date is as follows:

Carla Zowtiak	S. Frank Page
H. A. MacGregor	D. J. Kidd
D. Rosenfield	W. L. Bigg
David Skelton	Don Macpherson
Alex Stockwell	V. C. Williams
Robert Allin	Brent Moore
E. S. Keeping	

I am interested in assisting in

1. Observatory Work _____

2. Planetarium Work _____

Name _____

Even a society or association like ours can find a place for favorable publicity and good public relations. The Edmonton Centre is no exception. When the occasion arises we have enjoyed excellent coverage from newspapers, radio stations, and television stations.

We have been particularly fortunate in the cooperation given by CFRN Radio and Television stations. The service they give us is prompt and complete. Presentations are varied and not lacking in public appeal. We feel that they appreciate astronomy and are creating a place for it in the hearts and minds of the listening or viewing public. The public appears at this time to be discouragingly apathetic to advancement of arts and science. It is therefore gratifying to know that this institution has an unselfish devotion to the promotion to truth and we wish to commend it accordingly.

James Harrington.

Visit of The Edmonton Centre was highly honored on March 31 by the
Dr. McKellar visit of the National President, Dr. McKellar of the Dominion Astrophysical Observatory at Victoria. Dr. McKellar gave us a kind of preview of his talk on "Molecular Astronomy" to be given at Montreal this month. There was a good attendance, and the new material which Dr. McKellar gave us was greatly appreciated. We shall look forward to reading his address in some future issue of the Journal.

Lunar
Eclipse

Early on the evening of March 12, the first members of the observing group began to arrive at the Observatory to await the eclipsing of the moon. The night was brisk, with no clouds but a little haze. Arthur Dalton reported that the slight haze prevented timing of the contact of the penumbral shadow with the moon's disc. Present during the first stages of the eclipse were Robert Allin, Bruce Bohannan, Arthur Dalton, Adrienne Frame, Jim Harrington, Fred Jensen, Ian McLennan, Garry Marliss, Dave Marven, Brent Moore, Frank Page, Donald Rosenfield, Carla Rose Zowtiak, Laurie Sterling, and David Shelton. By 11:38, the first contact with the umbral shadow had occurred and Earl Milton was on the scene, followed shortly after by Franklin Loehde (and party). As the earth's shadow enveloped the moon, the haze thickened enough that timing of contacts was impossible. Telescopes were nevertheless busy, with many curious visitors standing in line to see the moon despite the chilly air. Radio contact (see Fred Jensen's report) was made with Calgary, though not with Calgary astronomers; the attempt showed the possibility of establishing a workable net to raise Calgary quickly for future events of this type. By 12:35 the heavy haze had dissipated and the moon shone an eerie orange-red. During totality between 12:50 and 2:16 a.m. continuous watch was kept on the darkened moon for "meteor flashes" by thirteen observers, in ten-minute shifts, using three telescopes. Results negative. The timing of the end of totality was discussed by Earl Milton and Robert Allin, with the result being 02:14:59.9 plus or minus 30.1 seconds. As the moon emerged from the earth's shadow, the haze reappeared, and the observers dispersed to the Pages' where the "all-night eclipse social" was a most welcome climax to the evening's work. --- E. M.

Ed. note:

As more than one reporter sent along thanks for the "totality coffee", we leave it for Earl's version to express their joint appreciation. It was good fun, anyway. May and I have a reputation for being "quiet folk", and perhaps some of the neighbors got a shock when the last of our guests left after the clock struck four. What we ourselves particularly enjoyed was that instead of coming in one tremendous flood at about midnight, they came in groups of half a dozen or so, making service easy and giving us a good chance to chat with everyone. And their costumes! Don Rosenfield looking twice as large as usual - and that's pretty large -- garbed like an Antarctic explorer (wise fellow!) and everybody else matching pretty well. If only all lunar eclipses would fall on a Saturday night it would be very convenient.

Current
Plans

On March 4 the Council was graciously entertained at the home of Dr. and Mrs. Crosby, on the occasion of its annual meeting for planning the programme for the new Society year. Full details of this will be printed in a later issue. More pressing business concerned (1) the details of a new Observatory programme, and (2) the necessity for training personnel, preparing programmes, and establishing an advisory committee to work with the City Parks Dept. in the operation of the Queen Elizabeth Planetarium when it is opened in early summer. On April 2 volunteers to assist in Observatory operation attended the Observatory for instruction in the operation of the instruments there. A list of members interested in planetarium work is also being drawn up. Our thanks to Dr. and Mrs. Crosby for their generous hospitality on the occasion of the Council meeting.

Radio Hookup by Fred Jensen (VE6MU) On Saturday night, March 12, 1960, on the occasion of the moon eclipse, our Centre requested a radio hookup between here and Calgary. The Northern Alberta Radio Club 2-meter station (VE6KM) belonging to Mr. Keith Millar (the NARC President), and one home station (VE6UV) belonging to Mr. Ted Hart, who received the mobile on 2 meters and transmitted to Calgary on 80 meters. The Calgary station to be contacted was VE6WL, a member of the Calgary Astronomical Club. Unfortunately he was not on the air, so a contact was made with VE6RQ in Calgary, who answered as many of our questions about his view of the eclipse as he was able. Standing by to help here if necessary were VE6EA at St. Alberta, VE6NT, VE6KM, VE6NF, and others of Edmonton.

The radio link did not quite come up to expectations owing to the lack of communication with the Calgary Astronomical Centre, but it did show what is possible when radio communication is used in conjunction with our society activities. In this respect I would like to point out that it is possible, through the Radio Amateurs, to link up all the astronomical clubs, not only in North America, but indeed of the whole world.

It would be very gratifying to think that both of our Edmonton clubs were the pioneers in all-world astro-radio communication network. The radio networks are in operation now and could be used very easily if each RASC centre took the trouble to contact the Radio Club in its area. This thought will be presented more fully at the May meeting by Mr. Fred Homes, the speaker on that evening.

Aurora Division -- As will be recalled in last month's STARDUST THE graph illustrating the number of aurora displays per month in 1959 suggested a falling off in displays as the year progressed. Observations during January of this year confirmed this trend, while those of February were even lower, dropping to five displays only. However, poor seeing conditions probably account in part for this low total. Earl Milton reports that thirteen nights were too cloudy for observation.

A total of ten reports have so far been received for 5 displays in February. Earl Milton led the group with 7 reports. The observers have hopes that March will show the typical spring increase. All reports are not in yet, but strong evidence points to a lively April in the Aurora Division. Society members should keep a lookout for some good displays this spring.

Through the kindness of the "Marliss Publishing Co." enough copies of the New Aurora Form were run off so that Earl Milton could take some down East for display. Members will be informed when these delectable items are available.

Thank You, Mr. Foucade. Even University property is not safe from vandalism. The lecture-room annex to the Observatory had got into a sad state of disrepair, with practically every pane of glass in the place broken, and the observatory "assistants" were designated to make repairs. But Mr. Foucade, a builder as well as a valued member of our Society, got ahead of us, and in one afternoon had all the windows neatly boarded up. Result, a nice-looking annex, and a glow of pride to think that we have members of Mr. Foucade's calibre in our society.

The Future
of STARDUST

Our Newsletter has seen a number of changes since its inauguration by the Observers' Group in 1954, but we have been fortunate all the way through in having willing workers to undertake the various tasks essential to its production. There were first the modest gelatine prints which might or might not prove legible, but little by little the technique improved until eventually every member was assured of having a readable copy. Some very busy men have given us of their time to assist in the printing. Last year Professor Gads was the man on the spot; this year our President, Jim Harrington, has used the resources of Leduc to turn out a very creditable job. We feel that here we should pass on our thanks to the unknown Mrs. X. who did such excellent work in making the stencils and running the Gestetner. It has been a pleasure to receive our own copy with drawings as well as text so faithfully reproduced.

But Jim can hardly be expected to put so much time -- and considerable expense, too - indefinitely into this work, and although he has announced his intention of continuing until the October issue, we feel we should now be looking ahead to the centralization of the editorial and printing work, in a geographical sense, that is. As you know, Jim lives at Leduc, and this necessitates the mailing and re-mailing of material from and to Edmonton, which takes considerable time.

Some time ago, Garry Marliss was kind enough to offer us the use of his dad's Gestetner for the publication of STARDUST, and we agreed then that it might be a proposition worthy of consideration in the future. We feel now that the time has come for this further step. As we see it, the job falls naturally into a few major stages:

1. The receiving and editing of reports and news items, writing editorials, and organizing the material into its page format;
2. Typing and drawing the necessary stencils;
3. Running the duplicating machine;
4. Stapling, addressing, and mailing the newsletter.

Although we could still manage fairly well with our present personnel, we believe it would lighten the work generally if we could enlist from among our members the services of one or two capable stenographers who would be prepared to help out with the stencils. So, when you are looking for new members among the ladies, bear in mind that the important thing is not so much whether she can make a cherry pie as whether she can type. Please look around.

We have a feeling that our May and October issues are going to be almost saturated with news of new developments. That's one reason why we are taking advantage of this space this month to inform our membership of the needs of our newsletter. It is not a crisis, but a transition that we feel can be made quite smoothly even if we do not get new volunteers immediately.

So once again, Jim, we want to thank you for the lovely job you and Mrs. X. have made, and in due season we shall be glad to graduate you with honors.

A correction: Many of you doubtless realized that something had been dropped from the bottom of page 1 of the March STARDUST. After "details distinguishable" should be added the words, "only with difficulty."

STARDUST: Editor, S. Frank Page, 8444 --117 Street, Edmonton, Alberta.

The Sky for
April

Jupiter and Saturn are still the most conspicuous objects among the planets for the forecast period.

Jupiter rises at midnight, Saturn about an hour later. To see them in the morning sky about a couple of hours before sunrise is always a lovely spectacle. If it is clear on the morning of Sunday, the 17th, it will be doubly worth while, as the moon should then be lying somewhere between them.

Another thing which beginners may like to watch for is the Lyrid meteor shower, due to arrive on the 21st. There will doubtless be signs of it, however, on the two evenings preceding and following that date. Look toward the north-east if you are watching early in the evening and later to the east or south-east, as these meteors seem to radiate from the general direction of the constellation Lyra. They are best seen when it is really dark, and often the best viewing hours are after midnight. It's quite unlikely that you will see another fire ball such as we witnessed in Alberta last month, but you never can tell. There's a lot of rock in outer space.