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The Royal
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of Canada

BULLETIN

La Société
Royale d'Astronomie
du Canada

Survey Results

[I would like to thank Glenn Hawley of the Calgary Centre for his work in entering the data from the survey as well as Walter MacDonald of the Kingston Centre who tabulated the following "non-text" questions into a single file, which aided my job immeasurably.—PMK]

Survey Participation

Centre	Number Members	Number Returned	Percent Returned
St. John's	38	13	34
Kingston	50	16	32
Ottawa	243	53	22
Québec	65	14	22
Montreal	110	23	21
C. F. de Montréal	36	7	19
Thunder Bay	38	7	18
Calgary	197	36	18
Sarnia	11	2	18
Winnipeg	45	8	18
Niagara	48	8	17
Hamilton	99	16	16
Halifax	138	21	15
London	46	7	15
Victoria	129	18	14
Edmonton	125	17	14
Windsor	41	4	10
Regina	21	2	10
Unattached	594	56	9
Vancouver	177	16	9
Toronto	855	75	9
Saskatoon	35	3	9
Kit.-Wat.	25	1	4
Not Stated	—	24	—
TOTAL	3166	447	14

(continued on page 4)

The Earth-Moon System as Seen From Venus

reprinted from *Stardust*

This sketch was made by Theodore G. Mehlin in 1959. When viewed from a distance of two metres, this sketch shows what the Earth and Moon would look like, if viewed at 100 power from Venus when Venus is at its minimum distance from us. (Based on our current knowledge, one would have to assume that any Venusians would not be attempting to make this observation from the surface!) ☆





BULLETIN

is a publication of the Royal Astronomical Society of Canada and is distributed together with the society's *Journal*. It contains articles on current activities of the R.A.S.C. and its centres across Canada, as well as articles from members and non-members which are of general interest to members of the society. Manuscripts should be submitted to the editor at the address below. Inquiries about the society should be directed to its national office at 136 Dupont Street, Toronto, Ontario, Canada M5R 1V2 (416) 924-7973.

Supplement to the *Journal*
Supplement au *Journal*

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Letters to the Editor

Webb Society Update

I would like to write a follow-up to Alister Ling's piece on the Webb Society that appeared in the August **BULLETIN**.

The Webb Society was founded in 1967 to provide some form of deep sky group within the United Kingdom, as at that time the national organization, the B.A.A., had no interest in that area. It has since broadened its base so that it has members in many countries. The council has a distinctly international flavour with the current galaxy section director being Brian Skiff, along with Ron Morales who is the North American secretary. The new magazine, *Deep Sky Observer* is edited by a expatriate Canadian, namely myself, and we have a southern hemisphere representative in Jim Barclay of Australia. The current membership is about 390 with about half now coming from overseas.

The society is divided into three main sections: the double star section, which is headed by Bob Argyle, the nebulae and clusters section, headed by Steven Hynes and the galaxies section, headed by Brian Skiff. One of the original purposes of the society was to publish updated guides as a replacement for Webb's *Celestial Objects for Common Telescopes*. This it has succeeded in doing with its series of *Deep-Sky Observer's Handbooks* now currently at eight, being 1-Double Stars, 2-Diffuse and Planetary Nebulae, 3-Open and Globular Clusters, 4-Galaxies, 5-Clusters of Galaxies, 6-Anonymous Galaxies, 7-The Southern Sky and 8-Variable Stars. Most of these handbooks are now dated and we are looking into publishing a new series.

As well as the publications mentioned by Alister, we also publish occasional monographs. The first, by Brent Archinal, was on non-existent clusters in the RNGC. We have been improving in our publishing techniques and if people pro-

vide us with glossy pictures, we will do our best to reproduce them. Although the society's early reputation was gained by visual work, many of our members now use both photographic and CCD techniques. We offer two annual prizes, one for the best article in the publications and another for the best rendering of images observed by eye.

The annual general meeting of the society was, until a couple of years ago, rather a small affair, but we have decided to have some name speakers to provide a focus for our observers.

Members get substantial discounts on all society publications. In order to facilitate members joining in North America they can submit their monies (in U.S. funds) to:

Ron Morales
1440 South Mamora Avenue
Tucson, Arizona 85713-1015
U.S.A.

Owen Brazell, Editor, *The Deep-Sky Observer*
12 Burton Close, Windlesham,
Surrey GU20 6QJ, England

People Sharing the Wonder

The recent articles and letters in the **BULLETIN** have been enlightening, as they have touched on some of my own observations of the society. Of particular interest was Mary Lou Whitehorne's article "Reflections—Where are the Women?" That was the first question to myself when I attended my first R.A.S.C. meeting as a teenager in 1956. It was an observers group meeting in Ottawa. There was not one woman present. In fact, my first impression was that the R.A.S.C. was a club of middle-aged men. Now I am one of them!

Of course, I soon discovered there were women in the R.A.S.C., and met a couple at the next regular meeting of the Ottawa Centre—one being on the staff of the Dominion Observatory. Miriam Burland, and later Mary Gray were active in their support of the society and Ottawa Centre. In fact, I soon discovered that there were a

number of women active in the R.A.S.C., many of them making astronomy their careers.

About 1958, having moved to Montreal, I joined that centre. My interest and knowledge of astronomy grew largely because of one member of the Montreal Centre: Isabel Williamson. She was an energetic leader of the centre, having served as president and as director of observational activities. Many young members got their start in astronomy under her leadership. There were a number of other women active in the Montreal Centre and several took on leadership roles.

In the early 1960's I became active as a coordinator in a national observing program, and was involved with the national office. My correspondence and trips to Toronto were made productive with the vital assistance of Marie Fidler. My research on the history of the R.A.S.C. led me to three more very helpful members: Ruth J. Northcott, A. Vibert Douglas and Helen Sawyer Hogg. Later years saw me change from an active observer to that of an armchair astronomer. Even then, I have had occasion to call upon the assistance of an important person in our society—Rosemary Freeman.

My association with the R.A.S.C. has included a number of people. Many have included women, but at no time did I ever distinguish gender as a relevant factor. All were people with a shared interest in astronomy. Not once did I ever hear anyone suggest that gender was a consideration in any matter. Perhaps, though, these women were special in a way men cannot understand. The mayor of Ottawa during the 1950's, Charlotte Whitton, once commented: "A woman must be twice as good as a man to advance half as far. Fortunately, that's not difficult." Perhaps these were women who were much better than the men in their fields, but I failed to recognise it. They were just people who shared my wonder of the universe.

Jim Low

111 Rainsford Road, Toronto, Ontario, M4L 3N8

A Constructive Approach to Sexism

I am writing in response to Mary Lou Whitehorne's article in the June issue of the **BULLETIN** and the resulting backlash appearing in the August issue. From the broad range of views expressed by the respondents it is readily apparent that sexism is a very sensitive topic. My greatest fear is that this discussion will get out of hand and degrade into nothing more than accusations and counter-accusations, fracturing the membership into opposing camps and achieving nothing of value. A more constructive approach is required to address this problem.

First, a number of fundamental axioms regarding sexism as it relates to the R.A.S.C. must be accepted by the membership. (These are as equally applicable to any other activity with which the R.A.S.C. does not wish to be associated. e.g. racism.)

1. Sexism exists, to varying degrees, in every facet of our lives whether it be our work, our private affairs, or the clubs and organizations to which we belong, including the R.A.S.C. This is not an accusation nor an admission, it is a fact.

2. The existence of sexism within the R.A.S.C. does not imply that the R.A.S.C. is a sexist organization. Nor does it imply that the R.A.S.C. actively supports sexism. Sexism lies within the individual, not our constitution.

3. The presence of sexist members within the R.A.S.C., or one's own centre, does not immediately implicate oneself as also being guilty of sexism. No member should be put on the defensive due to a "guilt by association" complex. Nor should a member feel that "if they are not part of the solution then they are part of the problem". Peer pressure and the absence of an appropriate mechanism for the reporting of sexist incidents are more to blame.

4. The lack of sexism within one's own centre or within the realm of one's own experiences should not be interpreted as meaning that sexism does not exist in the R.A.S.C. Such a conclusion requires a large and unjustified leap in logic. Nor should a similar conclusion be drawn from the lack of evidence presented in the **BULLETIN**. We do not want this publication to be turned into another "National Enquirer".

5. Sexist behaviour from a member at any event sponsored by the R.A.S.C. (public or internal) will ultimately be associated with the R.A.S.C., not the individual. As such, the society as a whole stands to lose credibility.

Acceptance of these basic truths is the first step to enlightenment, resolution, and the defusing of some of the ill feelings which have already been generated. Through their understanding it is hoped that members will cease

treating the issue as a personal attack and we will avoid wasting considerable time and effort embroiled in an endless debate.

The next step is for the national body to organize a harassment committee. The initial function of this group will be to define a process whereby any member of the public or the R.A.S.C. can file a formal complaint without risk of persecution and in confidentiality. Once in place, this committee will be responsible for the investigation of all complaints and the dispensing of any justice. **All** complaints should be forwarded to this body, not aired without evidence in a public forum such as the **BULLETIN**. (This should not be misconstrued as a condemnation of Mary Lou's lack of supporting documentation.)

Lastly, each member can do their part. Should you be witness to sexist behaviour, take the offending member(s) aside and explain the problem to them. Should the problem persist or if you feel too intimidated, bring the matter up with a friend or your executive. If their response is unsatisfactory, take the matter up with the national council.

It is every member's duty to ensure that the R.A.S.C. is a non-sexist, non-racist, religiously-neutral organization where people can learn and explore the wonders of the universe in comfort and without harassment of any type.

Chris Baldock

6 Foxcroft Crescent, London, Ontario N6K 3A4

RASC 2000

The Royal Astronomical Society of Canada is a long-established national organization with significant resources and a positive international reputation. Capturing this historical pride, many members have begun to provide fresh, dynamic ideas designed to serve the R.A.S.C. well as it prepares for the next century.

RASC 2000 is an informal group formed by concerned members who want to see positive, rational changes made for the good of the society. These changes are intended to ensure that the society better meets its members' needs.

All members of the R.A.S.C. are invited to participate in this process of renewal. To provide a focus, five members from across Canada have volunteered to form a steering committee. This committee will disseminate information and seek input from members concerning the platform and goals of RASC 2000.

The initial goals of RASC 2000 are to:

1) Enhance existing pride in the uniqueness of a truly national astronomical society.

2) Restructure the society publications to provide an improved forum for Canadian astronomy, both amateur and professional.

3) Nominate candidates for national executive positions in future elections. This will promote discussion of the issues. These candidates will be volunteers who share the spirit of RASC 2000.

4) Encourage the free flow of ideas, desires, and aspirations by facilitating direct communication between the national executive and the membership.

5) Establish a reasonable timetable for review and change. The society must be responsive to the evolving nature of astronomy and the changing needs of the membership.

This statement sums up the spirit of RASC 2000. Over the next few months, RASC 2000 will be developing a detailed position on many issues related to the national society. Your input is needed. For more information, contact the representatives listed below.

The steering committee consists of:

Peter Ceravolo, Ottawa Centre

(613) 258-1964 c/o george@sce.carleton.ca

Doug George, Ottawa Centre

(613) 225-7182 george@sce.carleton.ca

Rajiv Gupta, Vancouver Centre

(604) 733-0682 gupta@math.ubc.ca

Jim Himer, Calgary Centre

(403) 281-3222 jthimer@iras.ucalgary.ca

Mary Lou Whitehorne, Halifax Centre

(902)865-0235 whitehorne@husky1.stmarys.ca

Doug George

25 Conover Street, Nepean, Ontario K2G 4C3

B.O.G.—Calendar Correction

The centre pricing schedule for the Beginner's Observing Guide, as printed on page 6 of the August issue is incorrect. Those figures describe the centre pricing for the 1994 Observing Calendar with the exception that the suggested retail sale price for the calendar should be \$6.00 including G.S.T., not \$10.00.

The correct suggested centre pricing for the Beginner's Observing Guide is \$9.50 per copy (including G.S.T.), with the centres returning \$8.50 to the national office, thus allowing centres to make \$1.00 on the sale of each copy. I am sorry for any confusion this may have caused and I would like to thank Leo Enright for pointing out the error. ☘

That one body may act on another at a distance through a vacuum without the mediation of anything else, by and through which their action and force may be conveyed from one to another, is to me so great an absurdity that, I believe, no man who has in philosophic matters a competent faculty of thinking could ever fall into it.

Isaac Newton

English physicist/mathematician (1642 – 1727)

Survey Results

(continued from page 1)

General

Question 1

see page 6

Question 2

see page 6

Observer's Handbook

Question 6

I use the Handbook:

Always 118
Frequently 182
Occasionally 108
Infrequently 34
Never 3
N/A 2

Question 7

Generally I find the Handbook information:

Very useful 260
Useful 138
Sometimes useful 31
Seldom useful 10
Never useful 1
N/A 7

Question 8

I find the technical level of the Handbook:

Very easy 47
Easy 135
Average 210
Difficult 35
Very difficult 10
N/A 10

Question 9

The Handbook is my primary astronomy reference.

Yes 243
No 192
N/A 12

Question 10

I'd use and buy a smaller, less technical, Beginners Handbook.

Yes 105
No 331
N/A 11

Question 11

I'd like to have the choice of either the Handbook OR the Beginners Handbook with my membership.

Yes 174
No 250
N/A 23

Question 12

I'd like to see the Handbook unbundled entirely from membership and be given the option to purchase it or the beginners version.

Yes 89
No 338
N/A 20

The Bulletin

Question 14

I read the Bulletin:

Always 256
Frequently 120
Sometimes 45
Infrequently 24
Never 2
N/A 0

Question 15

Generally I find the Bulletin articles:

Very useful 32
Useful 169
Sometimes useful 197
Seldom useful 39
Never useful 6
N/A 4

Question 16

I find the selection of submitted articles presented:

Very interesting 38
Interesting 214
Sometimes interesting .. 163
Seldom interesting 23
Never interesting 4
N/A 5

Question 17

I like the fact the Bulletin accepts articles in English and in French.

Yes 329
No 86

Question 18

I have submitted at least one article to the Bulletin.

Yes 65
No 377
N/A 5

Question 19

I would consider submitting articles to the Bulletin.

Yes 260
No 162
N/A 25

The Journal

Question 21

I read the Journal:

Always 134
Frequently 84

Sometimes 93

Infrequently 106

Never 29

N/A 1

Question 22

Generally I find the Journal articles:

Very useful 15
Useful 84
Sometimes useful 145
Seldom useful 152
Never useful 43
N/A 8

Question 23

Generally I find the book reviews:

Very useful 38
Useful 140
Sometimes useful 135
Seldom useful 87
Never useful 35
N/A 12

Question 24

I find the selection of submitted articles presented:

Very interesting 28
Interesting 118
Sometimes interesting .. 161
Seldom interesting 111
Never interesting 24
N/A 5

Question 25

I find the technical level of the Journal:

Very easy 5
Easy 30
Average 139
Difficult 180
Very difficult 89
N/A 4

Question 26

I like the fact the Journal accepts articles in French and in English.

Yes 310
No 100
N/A 37

Question 27

I have submitted at least one article to the Journal.

Yes 55
No 386
N/A 6

Question 28

I would consider submitting articles to the Journal.

Yes 112
No 316
N/A 19

Question 30

see page 6

Personal

Question 32

Sex Male 388
Female 54
N/A 5

Question 33

Marital Status:

Single 132
Married or equivalent 309

Question 35

Number of other family members also interested in astronomy:

1 139
2 41
3 12
4 0
5 1
N/A 27

Question 36

Household annual income:

<\$20,000 25
\$20,000-\$40,000 87
\$40,000-\$60,000 137
>\$60,000 161
N/A 37

Question 38

Age: <16 1
16-18 4
19-21 4
22-25 9
26-35 101
36-50 187
51-70 101
>70 35
N/A 5

Question 39

Membership class:

Ordinary 341
Youth 6
Life 61
Senior 33
Honorary 0
N/A 6

Question 41

Years membership:

<2 58
2-4 102
5-7 83
8-10 39
11-15 50
16-20 39
>20 73

Survey Results

(continued from main listing)

Question 1

How do you rate the application of society funds to the following activities, or potential activities?

	don't know	spend much less	much less	about right	much more	spend much more
Promoting astronomy to its members	6	26	253	66	29	67
Promoting astronomy to the public	5	20	139	179	33	71
Promoting light pollution awareness	7	18	100	162	67	93
Providing educational books, slides etc.	11	35	170	106	15	110
Financial support for exchange speakers	18	67	189	42	12	119
Financial assist. for annual G.A. hosts	14	56	200	21	6	150
Providing awards and scholarships	20	53	208	62	6	98
Providing society publications	36	92	207	41	7	64
Travel grants for nat. council business	31	97	172	16	2	129
Donations to third world astronomy	57	57	95	55	11	172
Sponsoring public lectures	13	30	170	109	15	110
Research grants to centres	21	73	123	76	5	149

Question 2

Please indicate your level of agreement with the following statements;

	strongly disagree	strongly agree
I am generally satisfied that I am getting my money's worth for my membership dues	19	63
I am generally satisfied that my membership dues are well spent.	29	75
I am generally pleased with the selection of services and promotional items.	13	77
I would buy more RASC promotional items if they were made available.	57	119

Question 30

Please indicate your first (1), second (2), and third (3) preferences, among the following possibilities:

	1st	2nd	3rd	N/A
Journal continued in its present format	127	26	41	251
Journal published in some less costly format	78	71	73	225
Journal reduced from six issues to four	79	93	62	213
Journal and the Bulletin merged into a single publication, much like the current Bulletin	86	44	65	251
Journal unbundled from membership with option to subscribe	44	41	45	316
Journal to cease publication entirely	53	21	36	337

Question 62

If so, do you use it for any of the following: (excluding work-related activities)

Writing astronomical programs:	91
Accessing an astronomical section on a BBS:	86
Accessing an E-mail node:	82
Running commercial astronomical programs:	187
Doing R.A.S.C. related tasks (e.g. reports, letters):	120

Question 64

If so, do you use it for any of the following: (excluding work-related activities)

Writing astronomical programs:	14
Accessing an astronomical section on a BBS:	12
Accessing an E-mail node:	44
Running commercial astronomical programs:	6
Doing R.A.S.C. related tasks (e.g. reports, letters):	18

The October 1993 Council Meeting

Walter MacDonald
Kingston Centre

Doug Hube
First Vice-President

A national council meeting was held in Toronto on Saturday, October 30th. The meeting ran from 10:00 AM to 5:30 PM (with one hour for lunch). Though it took three hours just to get through the president's business, the rest of the agenda proceeded smoothly and efficiently. So, much to the surprise of everyone, all items on the agenda for this meeting were completed in the allotted time!

Resignation of Second Vice-President:

When the meeting opened, president Peter Broughton read a letter of resignation from second vice-president Michael Watson. Michael resigned from that office and all of the other positions he held in the society with the exception of society solicitor. These include chair of the constitution and long-range planning committees an co-chair of the 1994 solar eclipse committee. In his letter, he stated that he was unhappy at all the non-constructive criticism directed towards the national executive by various members over the last couple of years (and since the last G.A. in particular), and felt the best thing to do under the circumstances was to resign. This is a great loss for the R.A.S.C. Michael's departure leaves a tremendous gap in the workings of the R.A.S.C. and he will be greatly missed. No decision was made to appoint an interim second vice-president.

Sexual Harassment: The next item concerned a controversy involving a London Centre member who felt she had been harassed at a member's home. The London Centre president, Dave Toth, gave a detailed account of the whole situation. He expressed great concern that nth-hand stories about this alleged incident had raced from coast to coast before the London Centre knew about it, and thanked the Halifax Centre for at least inquiring about the facts of the matter. Council is seeking input from the member involved before taking action.

Proxy Votes: It was agreed that proxy votes have been handled in accord with the law, but that there is a misunderstanding of the process. To obviate difficulties in the future, the proxy form will be modified. It will include an explicit statement that the proxy holder has the right to withhold the proxy. It will include also a statement to the effect that the proxy holder has the responsibility to entrust his/her proxy to someone in whom they have confidence to act with due consideration to the arguments which are

presented in any debate which precedes a vote.

Expulsion of Montreal Centre Member:

The executive of the Montreal Centre has expelled a member without prior consultation with the general membership of that centre. A motion to delete the sections of By-Law Number One which give primacy to the national by-laws over centre by-laws was defeated. Notwithstanding a legal opinion that such action does not contravene Québec law, it does contravene the society's national by-law. National Council reaffirmed its support of By-Law Number One, and considers that individual to be a continuing member of the Montreal Centre.

Honorary Members: It was announced that Patrick Moore has accepted honorary membership in the society. Also, Alan Batten has accepted the position of honorary president.

Messier Certificates: A change was made to the requirements for getting one. All 110 objects still have to be observed, but now, instead of having to get the signatures of witnesses, a complete listing of all the objects must be supplied, as follows:

- Messier object (in numerical order)
- date and time of observation
- telescope used and magnification
- remarks

Financial Accounting: The treasurer reported on the ongoing efforts to manage the society's finances more effectively. Changes have been made in the use of the AccPac accounting program to make it easier to use. Lotus 1-2-3 will soon be used for budget preparation and reporting. New standardized forms for annual centre reports to national office are now ready.

Promotional Items: It was announced that Kim Hay of the Kingston Centre will be taking over the R.A.S.C. promotional item program from Cathy Hall.

The Journal: In response to a motion passed at the 1993 G.A., which called for a study of the possible merger of the *Journal* and the **BULLETIN**, council accepted a recommendation from the publications committee to create a model (mock-up) of such a publication. \$500 was allotted for expenses. It is hoped that the model will be presented to the national council and then to the general membership by the middle of 1994. It should be noted that this does not mean the *Journal* and the **BULLETIN** will be merged, just that the idea is being explored.

Astronomy Day: The week of April 11-17, 1994 will be International Astronomy Week. Saturday, April 16th will be Astronomy Day. The theme for 1994 will be "Astronomy for Children".

(continued on page 11)

Kobau 1993

Rick Keppler
reprinted from *The Starseeker*

Kobau 1993, from my first encounter, was a great time from a hardened observer/astrophotographer perspective. A few of the more dedicated amateurs (including myself) arrived on top of the mountain several days before the star party was scheduled to start in order to obtain good placement for our optics and to get more time under the dark, transparent skies. Unfortunately, the first two nights were completely overcast with heavy rain on the first night.

On the third night, the skies opened up with magnificent seeing, albeit poor transparency and an incredible amount of water vapour, which rapidly condensed on any exposed surface. Dew heaters and dew shields were an absolute necessity. Saturn was fantastic through my 13-inch Dobsonian at 500x. I found this to be the best view of it that I personally ever had until I took a look at it through Jim Himer's C-14 at 1100x. Really **big** with an incredible wealth of detail in the rings and the edges of the equatorial bands. I spent the rest of the night observing bright Messier objects and double stars until my secondary completely fogged over.

The following night was clear again and significantly drier. Seeing was degraded somewhat from the prior night although it was still quite good. The transparency had also increased considerably from the prior night. This night I spent on searching out Herschel 400 objects and a few Messiers down through Sagittarius and into Capricornus and Aquarius that I had not yet sketched. The skies were good from dusk to dawn, although a bit bright due to the amount of water vapour still present in the air.

The next two nights were clouded out with a few periods of light rain during the day. Partial clearing the following evening allowed observers time to use their scopes for a few hours if they were still up at 2:30 AM. I stayed up until dawn, wandering around and doing some "parasitic observing" through several other telescopes. Seeing was very good by 5:00 AM and the transparency was good. Unfortunately, morning twilight was not far behind and by 6:00 the only object visible in the sky was Venus.

The following evening was almost the opposite of the previous evening. The sky was clear initially, except to the south where a good lighting display was visible for several hours, until the clouds finally covered the entire sky by 2:30 AM. I spent two hours on my back with 20x80 binoculars roaming the Milky Way from

Cygnus, through to Perseus. NGC 7331 in northwest Pegasus was an easy target, appearing like a miniature M31. The Veil was very easy, as were the North American and Pelican. Seeing and transparency were both good as can be attested by the loud enthusiasm of the Vancouver group who were up the hill a slight way from where I was positioned and were excitedly going from object to object.

The last night, Saturday, was the best for deep-sky viewing I have ever had. Transparency was phenomenal, seeing was fair to good on the zenith to fair to poor 20° off the southern horizon. The sky was quite dark, reflecting the significantly lower amount of water vapour present compared to the previous nights. I spent the first two or three hours tracking and sketching Herschel 400 objects through Cygnus. During a swing to another object, I decided to have a look at M31. Magnificent!! I carefully avoided the core and swept through the spiral arms to 2° on either side of the central bulge. Dark lanes were immediately apparent on both the top and bottom sides of the spiral.

Through the binoculars, NGC 206 was seen without averted vision, as were several other bright condensations in the arms. M32 was completely embedded within the arms of the spiral. After approximately half an hour spent wonderfully on this object, I swung the scope down and started wandering through M33. The only way I can describe the view is by likening it to a slightly diffuse view of a large-scale photograph of the object. Amazing! After identifying all of the NGC components of M33, I swung the scope up to M101. Once again, I was treated to a view I had never imagined to be able to see without looking at a photograph.

Since this was my first time at Kobau, I had nothing else to compare it to. Other participants say that the superb transparency of the final night is a normal occurrence during previous star parties, but it is usually combined with good seeing. I am sure I will be back. Many thanks to John Cassino for hauling his 36-inch Dobsonian up the mountain, even though I only had one chance to view through it—but what a view of Stephan's Quintet!

I would also like to thank John Dobson for his engaging and controversial talk on dark matter as well as the solar viewing through his safe, "Sunscope". Kudos to all those who organized the party, operated the "Red Light Grill", and made it such a pleasure. Finally, thanks to all those who allowed me the parasitic viewing time and spent time explaining the construction and operation of their various telescopes and components. ☼

Nova East '93 Report

Douglas Pitcairn
Halifax Centre

Nova East was a great success this year, due largely to the enthusiasm of its participants and the cooperation of the weather. Friday night was totally socked in but Saturday was superb, with a minimum visual magnitude of about 6.5 and seeing that started off poor but improved to average as the night progressed. Sunday night saw a still respectable MVM of 6.0 but with better seeing conditions. I personally feel that it is the best sky that I have seen since Mount Pinatubo belched. I guess it is OK to start observing regularly again.

The public talks were held on both Friday and Saturday nights, with three short talks in each session. After the talks on Saturday, about a dozen astronomers took the effort to bring down their telescopes and show wonders to a crowd which averaged about 200 people. I estimated from the turnover that there were about 600 members of the public there over the hour and half that we were set up.

I would like to thank all of those people who took this effort to help in astronomy education. It is difficult to leave the campsite under such perfect conditions to do some public viewing sessions. Yet, I spoke with several people who came to the park specifically to look through a telescope. The benefits of this type of program to the long-term health of the astronomical community cannot be over emphasized. These people leave with a greatly increased awareness which I am sure will spawn future astronomers and sympathy for the fight against light pollution.

The viewing back at the site was stunning, with lots of equipment and images to remember. I tracked down, for the first time, Stephan's Quintet, a tiny group of five galaxies of some fame. They are very difficult in a 10" scope visually, but easy in a 13" under such ideal condition. Greg Palman of Maine and David Lane were astounding everyone (and themselves) with the images that they were getting by combining a laptop computer, an ST-6 CCD camera and Greg's 6" Astrophysics refractor. The qualities of the images they obtained were absolutely incredible. One of the highlights had to be using the 1994 Observer's Calendar as a field guide to track down Stephan's Quintet. As it was impossible to replace the eyepiece with the CCD camera without moving the scope, the starhopping method used was rather novel.

1. Get close with the eyepiece.
2. Switch to the CCD camera.
3. Take an image.

4. Try and match the star field obtained with the calendar image. If a match is not found, return to step 1.

5. Guess how hard and in which direction to nudge the scope. Return to step 3.

It actually only took three attempts at this method for it to work. With a 30 second exposure, the two closest components were resolved with a dark lane between them!

For 1994, we have decided to move Nova East to the Thanksgiving Day weekend, as the moon will be out of the way. This should allow us to start observing earlier and to be able to stay up and bag a lot of winter objects while it is still relatively warm. This is the last weekend that all of the park facilities are open and we understand that a lot of people from Saint John and Moncton traditionally come to the park on that weekend. Best of all, we should be well clear of the mosquitos! ☘

The 1993 Alberta Star Party

John Howell
Victoria Centre
reprinted from Skynews

As visitors from Victoria, we arrived at the campsite at Eagle Lake at 8:00 PM, having driven from near Kamloops that morning. Our modern "pop-up" tent was soon pegged down and we were greeting old friends from near and far, Glenn Hawley and Ruth Lewis to name two. As the Sun sank behind the Rockies, seen through the smog of "Ye Olde Cow Town" to the west, we had the tarp and sleeping bags lined up to view the Perseid meteors, which were due as darkness descended.

We were not disappointed. At 9:07 PM, in the bright dusk, the first one zipped from the north-east to the southwest and left a distinct trail as it died with a flare. Then a C.B.C. radio reporter interviewed us. "Three generations stargazing!" she commented.

The dark, moonless night saw the odd random meteor shoot west or east, but the Perseids came in small doses—three of four in a minute or so, then a ten minute lull. They were noticeably brighter than the ones I observed in 1988 from Mount Kobau. They were from magnitude -2 to -4, far outshining Jupiter which had soon set after dark. The young folk had been able to observe Jupiter through one of the many scopes set up, the largest being a 20" from Illinois.

By 11:00 Saturn had lazily climbed above the small trees that surrounded the area and the young people were enthralled with the beauty of the ringed planet. The meteor watchers were all

quietly recumbent and a collective "Ooooh, wasn't that a beauty?" was heard as a -3 magnitude meteor zoomed across.

An unusual sight was the sudden appearance of a new star high overhead. Several of us who saw it thought that it was the landing light of a plane en route to McCall Field, Calgary's airport, but this light did not move. Then, it suddenly brightened to -5 or -6 and vanished. A meteor burning up?

Discussion among the stargazers resulted in an explanation. It was a meteor coming down our line of sight. Sometime after midnight a similar event was observed, but this meteor was only 0 or -1 as it flared.

About 2:00 AM I was packing up in the rear end of my station wagon when the whole campsite was lit up, followed by chorus of yells. Ducking out of my raised rear door I looked up and a bright trail—with its bright end to the north—led north along the Milky Way. "That wasn't a Perseid!" observed a voice in the night. It sure was the brightest of the night. I would say it must have been almost a fireball.

Tiredness was taking its toll and one astronomer remarked that she had counted thirty-nine Perseids before midnight and forty-six from midnight until about 2:30 AM. So, to bed—a very fulfilling A.S.P. first night.

Thursday night was an anticlimax. We saw Perseids again, but only one-tenth of what had been observed twenty-four hours earlier. I feel that the Wednesday night Perseids were probably fresh "fallout" from Comet Swift-Tuttle.

Friday night was allocated to a talk for youth. As dusk arrived there were ominous dark clouds to the west, moving east. Then sudden brightenings—lighting! We all converged in the tin-roofed shelter and the talk commenced. The accompanying thunder made uncalled-for interruptions. A very bright flash was followed within seconds by a terrific clamour. The gusts of wind flapped the tents and a terrific rainstorm lashed the tin roof like staccato kettledrums until the speaker gave up. Nature had won.

It stormed for an hour and gradually eased up. We all examined our flimsy tent homes. One had blown over, another had windows open and a lot of wetness had gotten on the sleeping bags. Luckily, they were waterproof and still dry inside.

On Saturday morning the deluge, which must have been close to 50 mm of water, had started drying up. Since we had four grandchildren under ten with us we felt it wiser to return to better accommodations in Calgary. It was a very memorable Alberta Star Party that only Calgary could host. Thank you. We will be back again folks, but Eagle Lake is not the permanent home for it. Keep looking! ☘

An Astronomer's Christmas

Bill Broderick
Kingston Centre
reprinted from *Regulus*

*'Twas the night before Christmas and all through our home,
Everything was quiet, even up in the dome.
The telescope was nestled in its cradle with care,
In hopes that the stars might sometime be there.
City lights on the crests of the new-fallen snow,
Gave the lustre of midday to objects below.
But worse was the effect up in the sky—
Light pollution is enough to make astronomers cry!
When suddenly outside there arose such a clatter,
I sprang from my bed to see what was the matter.
Away to the window I flew in a flash,
Tore open the shutter and threw up the sash.
I looked out the window and what did I see?
Why, darkness had descended on the world. Oh glee!
That's what the commotion was all about:
Our power had failed—the lights had gone out!
As I lifted my gaze to the heavens above,
My eyes filled with glory, my heart filled with love.
The Milky Way stretched like an arch overhead—
The stars gleamed in their myriads—I eschewed my bed!
I rushed up the stairs to where the telescope waited,
And opened the dome—I was so elated!
Christmas had come in a wonderful way,
For this amateur astronomer, what more can I say?
As I peered through my scope, I exclaimed with delight,
"Merry Christmas to all, and to all a great night!"*

The Woman Responds

Mary Lou Whitehorne
Halifax Centre

I feel compelled to respond to the letters and article in the August **BULLETIN** that resulted from my Reflections column "Where Are The Women?" that appeared in the June issue.

Firstly I want to say that I do not now, nor have I ever, "impugned the R.A.S.C. as a whole" for being a sexist organization. Nor have I ever stated, or even implied, that it is "plagued by unconscious sexism." Nor have I said that our members who possess drive and intelligence are sexist. Quite the opposite in fact! In my article I stated that "sexism **occasionally** rears its ugly head". This is a far cry from implying widespread sexist behaviour on the part of the predominantly male membership of the R.A.S.C.

As for specific examples of sexist behaviour, I saw (and still see) no need to publish a list of examples for that would be tantamount to pointing a finger at certain individuals—something that I have no desire to do.

The R.A.S.C., like many science-oriented organizations, remains (to quote myself) "an elitist men's club, not by deliberate intent." As I tried to make clear, this is largely a result of society in general with its long history of science being seen as a man's pervue and not appropriate for women. Given that many of our more prominent members happen to be very highly educated and motivated, we are also seen as somewhat of an elitist group by non-members of both genders. (I am not laying blame here, I am simply making an observation.) This perception is more intimidating to potential female members than it is to potential male members, especially when combined with the obvious prepon-

derance of men in the society. Nowhere do I imply, as Mike Watson says that I have, that all male members of the R.A.S.C. are sexist. Likewise, I do not imply that R.A.S.C. men in particular consider domestic and child rearing duties beneath their dignity.

Am I part of the elite? Yes, I guess so. Am I part of the problem? Maybe I do intimidate a lot of potential members. Maybe not. However, I beg to differ with Mr. Watson when it comes to his assessment of my qualifications. I am not in a class to which he (or anyone else) cannot aspire. I am no different from any other member whose interest and effort have led them to a certain level of knowledge in this hobby. I have no university degree. (I have two diplomas in medical technology.) I am guilty of taking four university-level astronomy courses because I loved the subject so much that I could not resist—much like some of us cannot resist the latest development in eyepieces. I chose to invest in acquiring some understanding of the subject rather than in gadgets. This is because, for me, seeing the object is nowhere near as important as understanding something about the object. Anybody else could have done the same thing.

Yes, Mr. Gibbons, I **do** suggest that a significant number of women in Canada are oppressed enough to prevent them from participating in societies like ours. (Astronomy as a hobby is a particularly difficult example precisely because of the nature of the hobby, e.g. going out late at night to remote locations for observing sessions.) I have spent a number of years as a volunteer counsellor in the area of family relations and I know what I am talking about from what many women have told me in confidence. Sexism does exist. Sometimes it even occurs in the R.A.S.C., but the R.A.S.C. is not unique in this respect. Women in science, any science, do not have it easy. The problem can be found in any professional or amateur group associated with the sciences. For some very eye-opening facts that support everything I have said on this subject I would refer readers to *Scientific American*, November 1993, page 94; *New Scientist*, October 8, 1988, page 62; *Mercury*, Jan./Feb. 1992, the entire magazine.

The first step toward solving a problem is to identify it and then acknowledge its existence. By being aware that sexism happens we can therefore be on guard for it and take steps to reduce its toll on everyone. The R.A.S.C. with its legions of well educated, highly motivated, open-minded, caring and thoughtful members can be a model for others to follow. Why not? What have we got to lose but the women? ☺

(continued from page 6)

Observer's Calendar: The 1994 calendar promises to be even more successful than last year's. A significant profit will be generated for all centres involved in its sale and for the society.

Society History Published: President Peter Broughton's book, "Looking Up, A History of the Royal Astronomical Society of Canada", will be published in December. An order form for purchase of the book at a special pre-publication price appeared with the October BULLETIN.

Edmonton Grazing Expedition: A \$500 grant was approved for the Edmonton Centre's grazing occultation expedition. I.O.T.A. is contributing \$US 200 towards the expedition which, if successful, will produce some data of scientific value. Hopefully they will not get clouded out!

Centre Tax Receipts: The matter of centres issuing tax receipts was raised. There is no way for centres to by-pass national office in this area except by getting their own tax number. Steven Spinney of the Toronto Centre indicated that a centre does **not** have to be incorporated to get a tax number.

RASC 2000: A group of R.A.S.C. members from many parts of the country has formed an organization to examine all aspects of the operation of the society including committee structure, budget and publications. [See "Letters to the Editor" for more details.] The principal organizers are Doug George and Peter Ceravolo of Ottawa. Speaking to the national council, they indicated their intent to nominate a slate of candidates for the election of officers in 1994, among other activities.

Unattached Members: A proposal to eliminate the category of unattached member was defeated. Approximately 19% of the society's members are in that category.

Next Meeting: The next meeting is scheduled for Saturday, March 5th, 1994, at a location to be determined. ✪

You Know...

Doug Pitcairn
Halifax Centre
reprinted from NOVA NOTES

...your eyepiece is a wide angle one when:

- The edge of field is limited by the hair on the back of your head.
- Your finder has less field of view than your main scope.
- Your observing buddy steps up and asks, "Why you are looking through your scope backwards?". You scoff, then realize you were!

Charitable Donations and the R.A.S.C.

Doug Hube
First Vice-President

Thanks to the tremendous help of Glenn Hawley of Calgary, the results of the membership survey are now available on computer disk, copies of which have been made available to all centres. A hard copy of the results fills several hundred pages, the comments alone needing eighty-eight pages of small print! No one, has yet, been able to fully absorb all of that information, but a partial reading does reveal several interesting facts.

One of those facts is that a surprisingly large number of comments were along the lines of "I didn't know that I could donate to the society and get a tax receipt." and "Members should be encouraged to make donations." The society is a registered non-profit charitable organization and can, therefore, accept donations and issue receipts for income tax purposes. In response to these comments from members, a donation form is included below. If you wish to keep your issue intact, a photocopy will work just as well. ✪

Donation Form

The Royal Astronomical Society of Canada is a registered non-profit organization. As such, it can accept donations and issue receipts for income tax purposes. The society's activities are designed to benefit its members and to promote astronomy to the general public. The interest earned from the endowment, and other funds is directed towards those activities. (Details of the funds are described in the society's manual and in the annual report.) We invite members and friends of the society to make donations. Please complete the following form (or a copy) and send it to the national office along with a cheque or money order.

Name: R.A.S.C. Member? Yes No

Address:

Amount: Make cheque or money order payable to **The Royal Astronomical Society of Canada** and mail it to: National Office, R.A.S.C., 136 Dupont Street, Toronto, Ontario M5R 1V2.

Designate the fund to which your donation is applied by checking the appropriate box below.

- Peter M. Millman Endowment Fund.
- Ruth J. Northcott Fund.
- General operating funds. Up to 100% of the contribution may be returned to a centre of the donor's choice. If you wish, please designate a centre and the portion to be forwarded to it:

Thank you!

• You have to wear a safety harness to keep from falling into your eyepiece.

...you are doing too much stargazing when:

- You go in the local hardware store and ask the clerk for a third magnitude lightbulb.
- Your start making constellations out of the flecks of fly dirt on your living room ceiling.
- You call your first child Alpha.
- Dynamiting the local power station seems like a reasonable thing to do.

...you bought too large a telescope when:

- Aviation authorities make you put flashing red lights on the dewcap.
- You start to consider an eighteen-wheeled semi as a reasonable second vehicle.
- Greenwich Observatory asks you to stop slewing your telescope so much, as you are affecting the rotational rate of the Earth.
- The day you order a new mirror, Corning stock goes up twelve points. ✪

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If you can measure that of which you speak, and express it by a number, you know something of your subject; but if you cannot measure it, your knowledge is meager and unsatisfactory.

*William Thompson, Lord Kelvin
British physicist (1824 – 1907)*