



# REGULUS

JANUARY-FEBRUARY 1992

NEWSLETTER OF THE KINGSTON CENTRE  
OF THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

## EDITORIAL – TIME TO GET SERIOUS ABOUT LIGHT POLLUTION

Light pollution was the subject of a brief but rather passionate discussion at our December meeting. It's plain that it's coming to be seen as a serious problem by more and more amateur astronomers.

I have seen it as a problem for the past several years. Even though I live in a very rural area, I still get the sky-glow from Napanee and Belleville, both of which are over 20 kilometers away. Even little Tweed is a smudge on my northern horizon.

For those who live in or near larger urban centres, like Kingston, Ottawa and Toronto, it must be horrendous indeed.

I hope that in 1992 every Centre of the RASC will become active in helping to solve the problem. There's a tremendous amount of work to be done. Public officials at the Provincial and Municipal levels have to be educated. The business community has to be educated. Public utility people have to be educated. But before we can do much in these areas, many of us have to become educated.

After we've accomplished that, we have to become active in building networks—or joining networks that already exist. There are environmental groups out there—naturalist groups--organizations dedicated to protecting birds and wildlife--and many sympathetic and concerned individuals. All of these might well be very strong allies, if approached in the right way.

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**PUBLICITY:** Bill Broderick, (999) 999-9999  
**OBSERVING:** John Eustace, (999) 999-9999  
**ASTRONOMY DAY:** Stanley Hanna, (999) 999-9999  
Peggy Torney, (999) 999-9999

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**ADVERTISING:** Classified advertisements re items to buy, sell, or trade, are free to members of the Centre. Commercial advertising is \$25 per half page, \$50 for full page. Commercial advertisers must provide clean, camera-ready copy.

**CONTRIBUTIONS WELCOME:** Articles, notes on observations, humour, poetry, artwork, anything on astronomy or related topics, are invited. Submitted material may be edited for brevity or clarity. Please send all submissions to the Editor as follows:

Bill Broderick  
XXXXXX,  
XXXXXXXXXXXX, Ontario XXX XXX

**DEADLINE FOR MATERIAL IS THE 15th OF THE MONTH PRIOR TO PUBLICATION.**

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For example, during the spring and fall migrations, large numbers of birds (probably millions) are killed by flying into lighted buildings and other tall structures. The phenomenon is termed "tower kills". Night-flyers are attracted or confused by the lights of tall buildings, especially in foggy, rainy weather. On the Labour Day weekend in 1981 when such conditions prevailed, over ten thousand birds were killed at Ontario Hydro's Lennox Generating Station, near Bath, by flying into the two floodlight-illuminated smokestacks. In total, over the ten-year period 1972 to 1982, some 22,779 birds were killed at this location alone, as reported by Ron D. Weir in his book Birds Of The Kingston Region.

This particular problem was solved two years later, in 1983, when Ontario Hydro replaced the floodlights with strobe lights, which do not attract the birds. But, important to note—this action was taken only after birders and other naturalists raised a public outcry that Ontario Hydro officials could not resist.

The passion that others have for birds is not different than the passion that we have for the stars. It's all part of the love that many of us humans have for Nature. As Terry Dickinson has so aptly put it, amateur astronomers are "naturalists of the night". I know that many amateur astronomers love other aspects of Nature as well as the stars. And I also know that many people who do not call themselves amateur astronomers, nevertheless share our love of the night sky.

What I'm saying is that light pollution isn't just an "astronomy" issue. It's an environmental issue. It's an ecological issue. It's a social issue. It's an economic issue. It's an issue that everyone who cares about any aspect of Nature and the environment should get involved in. If WE who care aren't willing to get involved, who's going to?

As a first step, I urge everyone reading this—who has not already done so—to join the **INTERNATIONAL DARK-SKY ASSOCIATION**. Individual membership is only **\$20 U.S.** a year. Their address is:

**International Dark-Sky Association  
3545 N. Stewart  
Tucson, AZ 85718 U.S.A.**

After you've done that, spend a few more bucks (**\$10 U.S.** should be more than enough) and get a complete, up-to-date set of the IDA **Information Sheets**. Another **\$5 U.S.** will get you the IDA's **Light Pollution Book**. You won't become an expert overnight. But in time you'll become a very knowledgeable person on this particular problem and how it can be resolved.

I believe that some fifteen or twenty years from now, our towns and cities will be completely different places than they are today, insofar as lighting is concerned. I think we're going to see a great increase in the use of **low pressure sodium** for street lighting and other exterior applications, and in the use of **shielded** and **full cut-off** light fixtures, so that light is directed **downward** instead of spilling sideways and upward. I think we'll see a phasing out of bottom-lit billboards—that they will be replaced with top-lighted and internally lighted outdoor advertising signs. Our urban centres will have all the lighting they need, but glare will be absent, and visibility will be excellent. Even so, we'll be able to see the stars from almost everywhere. And rural areas will have nearly the pristine dark skies that prevailed at the beginning of the twentieth century.

But it will happen only if people make it happen. Right now, WE are the ones who want it to happen. So let's take the first step to making it happen and join the IDA. After that, there will be many other steps that some of us—or many of us—will have to take, but we can take a tip from AA and take it "one step at a time."

Let's make joining the IDA the **NUMBER ONE ITEM** on our list of New Year's Resolutions.

And if you've been meaning to get around to it, please turn to page 6.

BILL BRODERICK

# MESSAGE FROM THE PRESIDENT

By Ian Levstein

Greetings one and all in this holiday season, and may the New Year bring you much joy and happiness. Welcome to all of our new members, and also to the new executive and committee persons, who shortly take up their duties. I have appreciated your support during the past year, and I hope this year to continue a good working relationship. Thanks also for the many kind remarks regarding my talk on the “Harmony Of The Spheres”.

This coming year we have a number of interesting programs in place, beginning on **January 10th**. **John Mirtle** of the Calgary Centre, whose astrophoto appears on the front cover of the recent RASC **Journal**, will be coming to visit to speak about his work with astrophotography. This is the first leg of a speaker exchange, and hopefully one of our members will reciprocate, to present a program in mid-April (transportation subsidized by National Centre). I have been working on speaker exchanges for our Centre since April 1991, when I sent letters of inquiry to each of the other twenty-one RASC Centres. Although I received only a handful of replies, two were both favourable and feasible—Calgary being one of them. Since that time, I have been in contact, on and off, with the Calgary Centre, and have ironed out most of the details. This promises to be a very interesting evening, so please plan on attending.

In **February**, our own **Kevin Kell** will talk on observing without a telescope, and in **March** (money permitting), we will again host a traveller from the west, this time from Saskatoon. **Ed Kennedy** will be giving a talk on the 1835 Moon Hoax—it sounds very intriguing, doesn't it? In **May**, some of our members will be demonstrating their prowess with the latest astronomy software, and a screening of the “Dance Of The Planets” is anticipated. On **May 9th**, **ASTRONOMY DAY** will once again roll around, and the focus this year is on “Dark Skies, Safe Places”.

On a personal note, I would like to see an increase this year in the number of public observing nights, to (hopefully) one per month, as I feel this is a very important function of the Centre. In recent years, public observing sessions seem to have taken a back seat on our priority list (what priority list?), with the possible exception of **Astronomy Day**. These sessions are valuable opportunities both for the general public to do some guided observing, and also for our members to disseminate information and educate. Perhaps more importantly, they give us an opportunity to advertise ourselves. So **John Eustace**, our new observing chairman, you've got your work cut out for you. Don't worry, I'm sure our members will help you all they can.

Well, that's all for now. I think the year will be off to a very fine start indeed. See you soon.

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## PUBLICITY

“Light Pollution—Theft Of The Night” will be the topic at a meeting of the **Kingston Field Naturalists** on Thursday, January 16th.

**Bill Broderick** will be showing the **IDA slide presentation** on this occasion.

The meeting takes place at **Earl Hall**, Queens, at **8 p.m.**, in Room 111.

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# THE NIGHT IT DIDN'T GET DARK

By Frank J. Shepley

[Reprinted from the December 1991 AURORA,  
newsletter of the Windsor Centre of the  
Royal Astronomical Society of Canada.]

Friday, November 8, 1991, Tim Bennett and I left for Eagle around 3:30 in the afternoon. We arrived about 5:00, and with the sun setting early, we started setting up Tim's trailer right away. All the time we're setting up I was getting hungry. I went inside to set up my computer for the weekend and got the fire going to warm up the building.

I got the fire roaring, and went outside to see if Tim was ready to go eat. He yelled at me in a sort of discouraged voice, "Frank, will you look at that!" The first thing I thought of was clouds, since there was cloud when we arrived at Eagle.

I started walking away from the main building, and in the north-east there was a "blood red" colour in the sky. I got goose bumps all over my body and just yelled my usual "Yesss", with my fist closed and arm bent at the elbow, jabbing in towards my stomach. I knew why Tim sounded discouraged, the northern lights were out in full colour (and I mean FULL), he wasn't going to observe for a while tonight.

The lights started blood-red in the northern-east in the curtain display, and looking west, there was one spike shooting straight towards Vega.

I shot some pictures, then we finally went in for supper. We were so excited we wanted to tell the waitress, but she was too busy to take a look. We finished supper and rushed back so not to miss anything, with Tim saying with a slight pout, "I want to observe".

We got back to the campground and Bruce (a new member of the Eagle Observers) started telling us what we missed while we were gone.

He said that there were all kinds of displays of aurora, but all centred straight up. This was strange. The lights had slowed down by this time, so we took his word.

About an hour later, they started up again, in full force! By this time, it was about nine o'clock, this means that it should be dark. The lights were so bright that we were able to walk down to the lake with no flash lights. The effect was like the first quarter moon.

The meridian activity that Bruce talked about was relived again, as pulses of light shot towards the sky overhead. The reds were so brilliant, forming objects. Someone said, "Look, there's a butterfly!" Later there was a face with a couple stars for eyes. They got bright, then they died down, and when you thought they were over and were ready to go in, they started up again. I said out loud, "God's playing with the dimmer switch again."

We all phoned home to wake up the city dwellers to this eye-catching event. Tim's wife said that they mentioned it on the TV, telling people what it was.

There was about two more main eruptions later in the night, each different and each as beautiful as the last. They lasted all night till twilight, giving way to the brightest light we know.

(Continued next page.)

With the camera shooting off, we shot about seventy pictures between J.D., Bob, and myself. Hopefully we have something visual to remember.

On the way home I told Tim I was going to write this article. He said, "there is only one word to describe that night, AWESOME!"

**EDITOR'S NOTE**

Because so many of us Kingston Centre members were "otherwise occupied" on Friday, November 8th due to attending our Centre meeting and what-not, I thought you'd appreciate the above article by **Frank Shepley** of Windsor.

I saw the aurora as soon as I left the house to come to the meeting, at 6:30 p.m. I immediately called Gisela to come and look. As soon as I'd stepped out of the door I saw this rose-coloured shaft of light in the north-west. Looking around, I saw that the whole northern part of the sky was ablaze with aurora. There was another red shaft in the north-east. Both ascended into the sky at a slight slant, nearly meeting in the zenith.

During the approximately 20-minute drive down to the #401, the red colour was apparent all the way. After that, I had to stop looking at the sky and pay attention to the road!

On the way home the aurora was still spectacular, but by then (around midnight) there were no colours visible from my area, just ghostly white shafts of light shooting into the sky. The zenith was a crown of light.

Utterly (as **Tim Bennett** so succinctly put it) AWESOME! ED.

*To see a world in a grain of sand  
And a heaven in a wild flower,  
Hold infinity in the palm of your hand  
And eternity in an hour.*

--WILLIAM BLAKE

**ASTRO JUMBLE**

Unscramble the letters (see clue), then use the **circled letters** to solve the puzzle. Answer in next issue. Good luck!

**CLUE: KINDS OF TELESCOPES**

F	E	R	A	C	R	O	R	T			
	○					○					
C	L	O	R	T	R	E	E	F			
		○		○				○			
W	O	I	N	T	E	N	A	n			
	○						○				
S	A	N	G	E	R	G	A	I	S		
				○		○					
K	U	T	O	V	M	A	S				
				○			○				
P	A	D	O	R	G	I	T	A	C	I	T

**A COMMON MALADY  
AFFECTING MANY AMATEUR  
ASTRONOMERS...**

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Answer from last issue

**WINTER CONSTELLATIONS: AURIGA,  
PERSEUS, TAURUS, ORION, GEMINI**

**What the humorous astronomer was far  
from....**

**SIRIUS**

## RASC LAUNCHES NEW PUBLICATION

After many years of planning and considerable discussion as to what form it should take, The Royal Astronomical Society of Canada is launching a new observing guide for the beginning observer. This publication, which is expected to be an annual, as is the **Observer's Handbook**, will assist the novice in finding his or her way around the night sky and provide basic observing tips in a non-technical, and unthreatening way. The title of this new publication will be **THE BEGINNER'S OBSERVING GUIDE 1992: AN INTRODUCTION TO THE NIGHT SKY FOR THE NOVICE STARGAZER.**

It will assist the beginner in becoming acquainted with the constellations season by season. It will teach basic information about motion, measuring distance, and finding direction. The six basic star maps found in the **Observer's Handbook** are used as the basis for explaining the night sky throughout the year.

This guide will provide helpful tips on becoming a good observer and information that a beginner should know about what to look for at various times of the year, and how to record observations. A key section provides information on the importance of binoculars for the beginner, and suggests when such a person should consider the purchase of a telescope.

Basic information about observing the moon, planets, and eclipses during 1992 is provided. There are also sections on observing meteors, comets, the aurora, and the zodiacal light. The safe observation of the sun during the daytime is also considered.

An important part of the book deals with where the beginner should turn for more information and this is considered under four headings: Joining an astronomy club, Books, Magazines, and Visiting observatories and planetaria.

Near the end there is a part of the book dealing with suggestions for **Brownies, Cubs, Guides, and Scouts**, all of which have certain programs relating to astronomy requirements for their badges. The book concludes with some frequently-asked questions that seem always to be on the minds of beginning observers--along with their answers. There is also an appendix of useful information, containing several simplified charts such as those with basic information about our solar system and certain lists of objects that can be easily observed.

In all there are 116 pages of information that should prove very useful to the beginning observer. The format is such that it is intended for easy use outdoors at an observing table; a plastic spiral binding will allow the book to lie flat. At a price of approximately \$5.00, this observing guide should prove to be a very popular tool in the hands of young beginners.

AND NOW, A BELATED CHRISTMAS GIFT  
TO ALL THE PROCRASTINATORS IN OUR  
MIDST WHO'VE BEEN MEANING TO WRITE  
SOMETHING FOR THE NEWSLETTER AND/OR  
DO CERTAIN OTHER WORTHWHILE THINGS...

*This is  
a Round Tuit. Guard  
it with your life as  
Tuits are hard to come by,  
especially round ones. This is  
an indispensable item. It will  
help you become a more efficient  
worker. For years you have heard  
people say, "I'll do it as soon  
as I get a Round Tuit." Now  
that you have one you can  
accomplish all those things  
that you've put aside  
'til you got a  
Round Tuit.*

# AURORA TELEPHONE LINE

JANUARY 1992 - JUNE 1992

NAME	NUMBER	HOW LATE?
1. Denise Sabatini & Leo Enright	(999) 999-9999	ANYTIME
2. Ian Levstein	(999) 999-9999	12:00
3. Murray Anderson	(999) 999-9999	11:30
4. Stanley Hanna	(999) 999-9999	1:00
5. Frank Cervenko	(999) 999-9999	ANYTIME
6. Kim Hay	(999) 999-9999	1:00
7. Trish Blasko	(999) 999-9999	11:00
8. Kevin Kell	(999) 999-9999	11:00
9. Chris Coilin	(999) 999-9999	12:00
10. Peter Kirk	(999) 999-9999	12:00
11. Lynn Dougan	(999) 999-9999	ANYTIME
12. Christine Kulyk	(999) 999-9999	1:00
13. Jim Smith	(999) 999-9999	ANYTIME
14. Walter MacDonald	(999) 999-9999	ANYTIME
15. Bill Broderick	(999) 999-9999	12:00
16. Joanne Burns	(999) 999-9999	1:00
17. Peggy Torney	(999) 999-9999	2:00

## RULES

1. The person who sees the Aurora should call the person named next on the list.
2. That person should call the person named next on the list, and so on.
3. The last person named should call the first person named.
4. **The person who starts the phoning and all others who participate should remind the next person of the name of the person who started the procedure. The one who started it does not want to receive a call from someone else.**
5. If it is past the time when the next person wants to be called go to the next person named on the list.
6. If there is no answer, the caller should go to the next name on the list.

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## FOR SALE

### CELESTRON 80 mm REFRACTOR

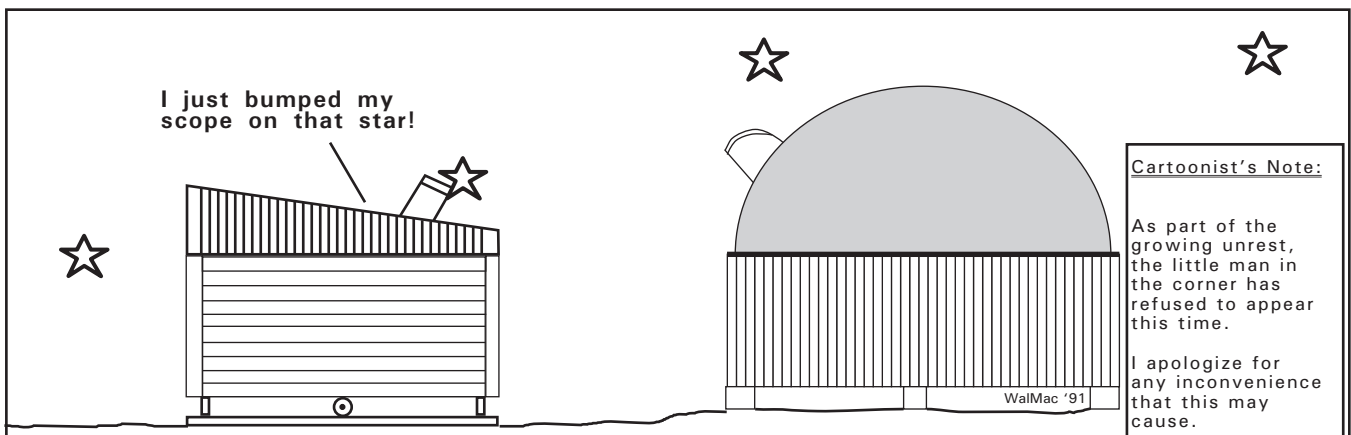
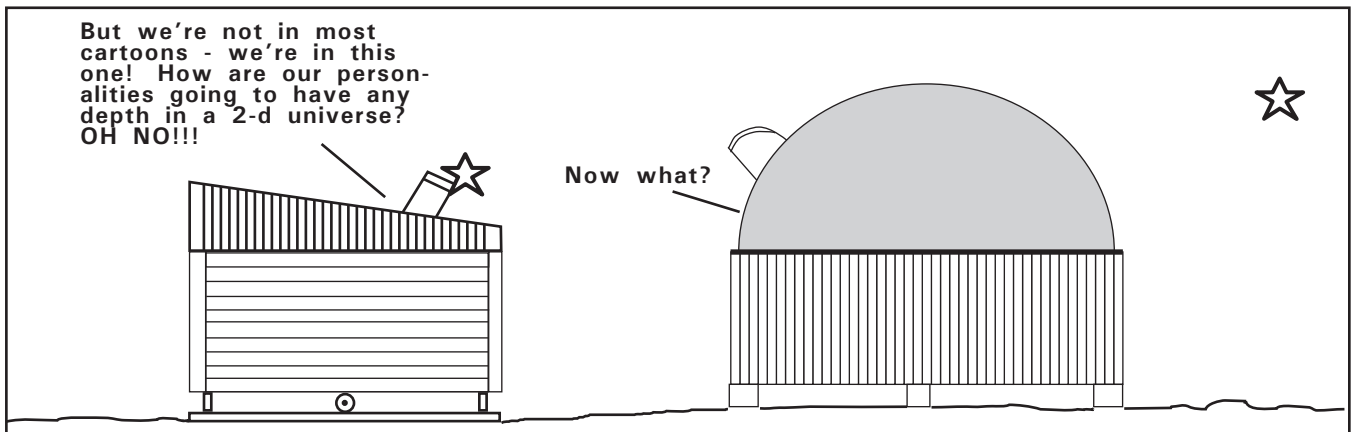
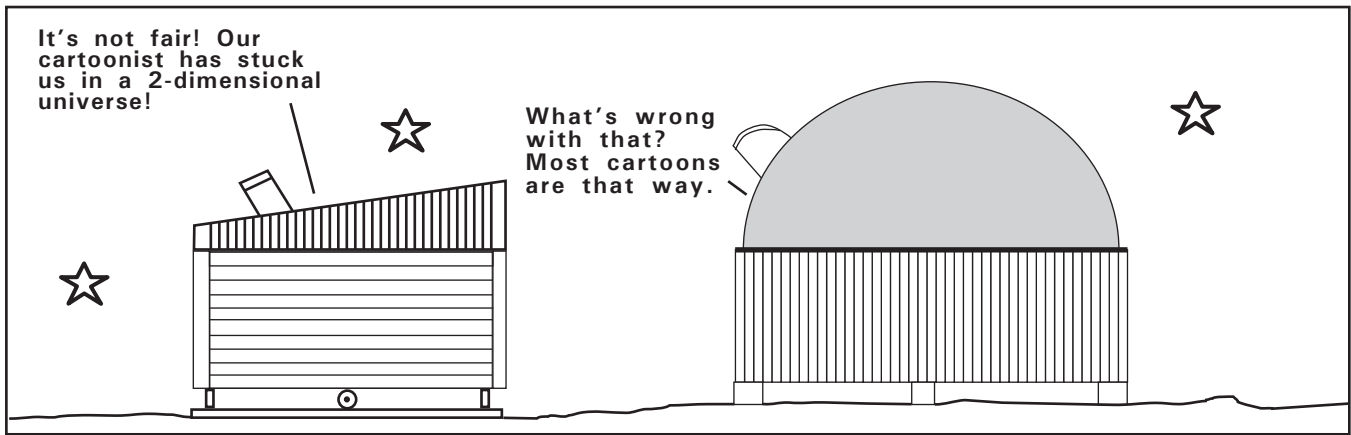
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30 mm PLOSSL AND  
18 mm MEADE SUPERWIDE ANGLE  
PLUS 2 - 2.5 X BARLOW LENS  
AND TELRAD FINDER  
ORIGINAL COST \$1183.00  
SELLER WANTS \$800.00  
CONTACT TERRY DICKINSON  
**(999) 999-9999**

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CELESTRON VISUAL BACK, 1.25"  
(\$46 VALUE) ASKING \$25.00  
BARLOW LENS, 2 X, 1.25"  
(\$50 VALUE) ASKING \$25.00  
EYEPIECE ADAPTER, 0.96" TO 1.25"  
(\$35 VALUE) ASKING \$15.00  
CONTACT BILL BRODERICK  
**(999) 999-9999**

# The Celestial Observer



## MEETINGS AND EVENTS HORIZON

**Regular Meetings** of the Kingston Centre, RASC, are held on the **second Friday** of each month at **8 p.m.**, in **Room D-216**, MacIntosh-Corry Hall, Queen's University. **Non-members are welcome.** Executive meetings are at 7:30 p.m.

- |                                       |   |
|---------------------------------------|---|
| <b>Fri., Jan 10</b> REGULAR MEETING.  | <b>Speaker, John Mirtle, Calgary Centre: "Astrophotography"</b>   |
| <b>Fri., Feb. 14</b> REGULAR MEETING. | <b>Speaker, Kevin Kell: "Observing Without A Telescope"</b>   |
| <b>Fri., Mar. 6</b> REGULAR MEETING.  | <b>Speaker, Ed Kennedy, Saskatoon Centre: "1835 Moon Hoax". (NOTE: Meeting date advanced one week.)</b> |

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**DUES REMINDER: REGULAR MEMBERSHIP \$40; YOUTH (UNDER 18) \$25; SENIOR (OVER 65) \$25; LIFE \$640; ASSOCIATE (SPOUSE, CHILD, PARENT OF MEMBER)\$10**

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