



Event Horizon

Volume 19, Number 4
February 2012

From The Editor

February usually brings to mind roses, chocolates and hearts - not astronomy. However, consider the following: in this month's newsletter, Bill Tekatch reminds us all of the founding principles of our favourite astronomy club. An astronomy club of this size does not thrive without the hard work of its members. Fortunately, we love what we do: introducing people to the night sky.

At a recent telescope making meeting, we paused to admire a donated, handcrafted 6" Newtonian telescope on an equatorial mount. The telescope had obviously been a labour of love for its owner.

Whether your passion is observing, building a telescope or contemplating theories of the universe, February is a good time to stop and smell the roses.

Have you hugged your telescope today?

Ann Tekatch
Editor@amateurastronomy.org



Chair's Report by Bob Christmas

Here we are, one month into 2012, and things are starting to get cooking for this year for the HAA. We have a pile of activities and speakers lined up over the next several months.

This month, on the 10th, our main meeting speaker will be Ian McGregor from the Royal Ontario Museum, which has its Maya exhibit this winter and spring. Ian will be talking about Maya cosmology, and its connections to 2012. If you don't already know, the Maya "long count" ends on December 21, 2012. A lot of hype has been made about this date, especially by those who say this is when the world will end. But it's just a date. It just so happens to be the last day of the current "long count", and December 22, 2012 is the first day of the next "long count". As a computer scientist, all of this reminds me of Y2K at the turn of this century. Nevertheless, I am fascinated about Maya astronomy, Maya mysticism, and Maya mathematics. HAA member Greg Emery wrote a great, informative article on the Maya calendar in January's Event Horizon in his "Through the Looking Glass" column on pages 3 and 4 of [last months EH](#). Ian's talk promises to be abso- *(Continued on [page 2](#))*

IN THIS ISSUE:

- Help Your Club
- For Sale
- Astronomy Crossword
- January Meeting Summary
- The Sky This Month
- For Sale
- Cartoon Corner
- Crossword Answers
- Upcoming Events
- Contact Information

Chair's Report (continued)

lutely interesting, and I am very much looking forward to February's meeting at the Spectator Auditorium, which is expected to draw a large audience, so take my advice; come early to get a good seat!

In March, the HAA will be putting on another set of shows at McMaster University's McCallion Planetarium exclusively for our HAA members. We've been doing this for the past couple of years, and one of our members, Andrew Bruce, has been the driving force behind organizing, arranging and booking these shows at Hamilton's local planetarium, exclusively for the enjoyment of our members, and I thank Andrew very much for his service in this regard. A tentative date of March 15th is being considered, and we should have tickets available for both these shows, probably for \$5 a piece, at the February meeting.

We also have some interesting speakers lined up for our May and June meetings. Rob Cockcroft, director of the Origins Institute at McMaster University, who run the above-mentioned McCallion Planetarium, as well as the university's new 3-D Theatre, will be speaking in May about the upcoming Venus transit. We will have Mike Spicer speaking at our March meeting, and Mike Reid will be coming to speak at our June meeting.

Also, the HAA is in the process of shoring up plans for its public nights in 2012, including stops in Grimsby, Hamilton, Brantford and Burlington. For years, these public nights have been an integral part of the HAA's outreach to the Hamilton area community, and we will continue this rich tradition of telling, and showing, the public about astronomy on a hands-on basis.

And let's not forget the exposure the HAA has gotten lately in the local media through all the area's newspapers, on radio, and on CHCH television. A very heartfelt thanks must go to our publicity director, Mario Carr, who has done a tremendous job reaching out to the community through our local

media, spreading the word about astronomy, our club, and our activities. Mario has been featured repeatedly on CHCH News in recent months, talking to CHCH weather personality Steve Ruddick about astronomy. Well done, Mario!

We're now into the middle of winter, and the winter constellations, including Orion, Canis Major, Monoceros, Taurus, Gemini, Auriga, and the rest, are at their highest in the sky, and offer a lot of deep-sky sights to enjoy, if you are willing to brave the colder temperatures. Granted it's been cloudy most nights recently, there has nevertheless been the odd clear night. Venus is now in the evening sky, and Jupiter is not far above Venus. Also, Mars is in the late-evening/early-morning sky in Leo.

And don't forget, we are heading into a period of higher solar activity, and there have been a lot of coronal mass ejections (CMEs) from the Sun of late, resulting in more displays of the Aurora Borealis. I even saw a couple of auroral pillars through a break in the cloud cover the other night, before they disappeared a few minutes later.

So there you have it! Lots of neat stuff is going on, and lots of neat stuff will be happening, both inside our club and out, over the next few months, so come on out, get involved, or just grab your telescope, binos, or imaging equipment, and enjoy the night sky, either by yourself, or with your friends and fellow members of this great club!

Clear Skies!

Bob Christmas



Masthead Photo Credit: Winter observing at Binbrook Conservation Area. Photo taken by Joe McArdle on January 21, 2012. Both Kevin and his telescope are bundled up against the cold and ready for a night of spectacular winter skies.



Help Your Club by Bill Tekatch

The Hamilton Amateur Astronomers is an all volunteer club. The founders contributed much time, effort, and donations to ensure our success. An example is Grant Dixon who conducted many planetarium shows and donated thousands of dollars to the club. They also based many of our rules, ideals, and goals, both written and unwritten, on the experiences that they had before founding the club.

In 1905 the Spanish philosopher George Santayana published his 5-volume work *Life of Reason*. Think about the following sentence from the first volume *Reason in Common Sense*.

“Those who cannot remember the past are condemned to repeat it.”

It is important to remember, and to tell this story from time to time so all members can think about what the club means, what its goals and values are, how to maintain them, and why it has been a success for 18 years.

The founders belonged to a local group that was associated with a national organization. They realized that it was increasingly difficult to retain and attract members because of the high membership fee. Some started to attend the national executive meetings hoping to keep the fees from increasing. At a pivotal moment they did influence the executive to facilitate the start of a national calendar, but the national executive was determined to institute a membership fee increase.

The local group felt that if they could gather proxies for the national general meeting that they could prevent a fee increase. Proxies were collected and sent with a local member to the meeting. The fee increase was passed.

Subsequently we learned that our representative was convinced to withhold our proxies from the

vote. We were even more upset when a national executive justified the withholding of proxies by simply saying it was legal. Justifying this action as legal or not illegal did not make it right or ethical or democratic.



The first H.A.A. Council: 1993-1994

As the local group was only associated with the national organization, we felt that we should become fully independent. It was agreed to hold a vote. The vote lost. Doug Welch asked that we meet at his home.

So in 1993 several people met in Doug Welch's living room and most became the founding members of the Hamilton Amateur Astronomers.

Our unwritten motto was “Astronomers that just want to have fun.”

Our guiding principles were and still remain, fun, public education, low fees, low costs, don't own property, keep it simple, no Robert's rules, and promote astronomy and the allied sciences.

Our values are to give the club our all, we volunteer our time, donate funds, and help however we can, expecting nothing and taking nothing from the club.

While volunteers don't earn money or receive any benefits from the club, volunteering can produce a feeling of self-worth, satisfaction, and earns respect. If volunteering, selflessly giving to something you believe in, is for you, let your club know. The club always needs a pool of volunteers for public education events, or to carry out functions to run the club. Even if you are never called on to help, being available, making yourself known to the council makes your club stronger.



FOR SALE

8 inch Meade SCT telescope has built in setting circles and clock drive, HD wooden tripod, red dot finder, choice of 8-12-15 inch dew shield, includes wooden storage/carrying box and dust cover.
\$ 600 --

Please contact: Harvey Garden
(905) 692-4595

TRIPOD FOR SALE

This sturdy, aluminum telescope tripod was donated to the club and is being made available for the bargain price of \$60. The tripod could be used to support a binocular mount similar to the parallelogram mount built by Jim Wamsley.

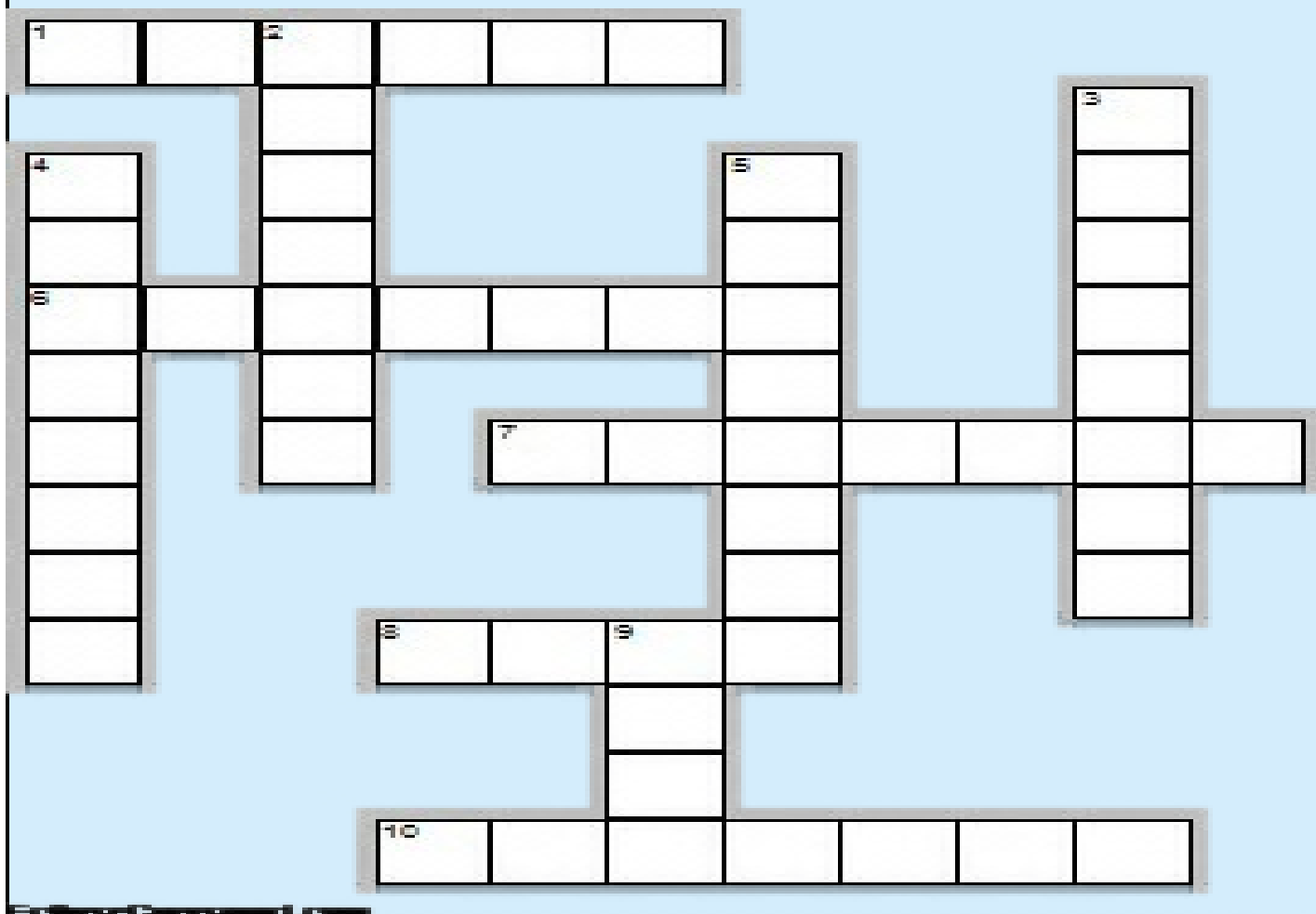
Contact Jim Wamsley at 905-627-4323.

Proceeds from the sale will be used to support the club's loaner scope program.





Astronomy Crossword by Mario Carr



Across

1. On Feb. 9 Venus is close to this planet in the evening sky
6. On Feb. 3 you can see this comet close to the M92 cluster in the predawn sky
7. Valentine's Day moon phase
8. On Feb. 7 the moon is?
10. On Feb. 26 the crescent moon is close to this planet in the evening sky

Down

2. On Feb. 15 the crescent moon is close to this star low in the dawn sky
3. The sun is becoming active and you could see these lights
4. On Feb. 10 this person speaks on Maya Cosmology
5. For two weeks after Feb. 10 you can this light in the western evening sky
9. This type of day on Feb. 29



January 13, 2012 Meeting Summary by Keith Mann



*Rob Roy announcing the silent auction.
Photos courtesy of Joe McArdle.*

If you were a regular observer of the Spectator building, you'd be used to seeing the members and guests of the Hamilton Amateur Astronomers arriving on the second Friday of each month. You may have been surprised this past month, however, when the crowd showed up well before the usual time. Had you ventured inside, you'd soon have discovered the reason for the early arrival: an unprecedented silent auction of astronomy-related books was underway. One of the HAA's inaugural members, **Rob Roy**, had decided to part with a portion of his collection, and what better place to find enthusiastic buyers than at the club he'd help to found? By the end of the evening, Rob's books had found new homes and, thanks to Rob's generosity, the club had received a portion of the proceeds.

Things got back to normal at 7:30 when HAA Chair **Bob Christmas** opened the meeting with a mix of good news and bad. On the downside, our scheduled guest speakers for the month, **Brady Johnson** and **Brian Dernes** of KW Telescope, were unable to join us due to weather conditions; Brady and Brian will visit us at a later date. The good news, though, was that the popular series of quarterly observing sessions, "The Sky This Season" was scheduled to return to Binbrook Conservation Area on the evening of January 28th. Also, keeping with the evening's theme of books, Bob announced that the book club had selected Edwin Abbott's classic "Flatland" for discussion at its February 4th meeting.

Our Secretary, **Jim Wamsley**, updated us on the Loaner 'Scope program, which continues to be popular. Members are welcome to speak to Jim to reserve a 'scope. Jim also reminded us all that polar fleeces embroidered with the HAA logo are now available

Observing director **John Gauvreau** opened "The Sky This Month" with several great images: the Crab Nebula taken by our own Kerry-Ann Lecky Hepburn; a Cassini image of Saturn's moons Titan and Dione against the planet and its rings; and finally several of the newly-discovered Comet Lovejoy. John then told us of the events of January 13th, 1610, when Galileo first observed all four of the Jovian moons he discovered (and later concluded, famously, that these objects orbited Jupiter and that the universe was therefore not geocentric).

In response to John's call for member observing reports, **Kevin Salwach** related his spotting of "Moon dogs," which, as John explained are spots of light that appear near the moon as moonlight is refracted by ice crystals in the atmosphere.

Proceeding with his talk, John focused on the seasonally prominent grouping of the constellations Canis Major, Canis Minor, Orion and Taurus. He called our attention to the relatively obscure Lepus (the Rabbit), whose place in astronomical lore is strangely uncertain. Lepus, John told us, holds the globular cluster M79 and the fascinating Hind's



Members scramble to get their final bids in at the Silent Auction table.

(Continued on [page 7](#))

January 13, 2012 Meeting Summary (continued)

Crimson Star (R Leporis), a carbon variable whose brightness and reddish colour can be seen to change over its period of about 420 days.

As we adjourned for the intermission, John reminded us to look skyward just after sunset on January 26th to spot the conjunction of Venus and crescent Moon. The club's resident computer experts then scrambled to their PCs and, after the break, treated the membership to a virtual recreation of Galileo's famous observation, over four hundred years ago, of the four Jovian moons now eponymous to him. What a stirring way to close the evening, imagining ourselves peering through hazy lenses to record the observations that would change our very perception of our place in the universe!



One of the highlights of the silent auction was this "rare" front page photo from the Hamilton Spectator signed by two of the people in the photo. Minimum bid was \$100!

(I'll sell my copy for just \$95. - editor)



December Treasurer's Report by Steve Germann

Unaudited

Opening Balance	\$6579.36
Major Revenue	\$1287.60
Major Expenses	\$493.41
Closing Balance	\$7373.55

Major Revenue included: 50/50 \$52, Payments for Fleece Jackets \$590, Donation for Book Auction \$90.60, Memberships \$330, Calendar Sales \$235, Sale of telescope part \$15

Major Expense was payment for Fleece Jackets, \$493.41

With this month's calendar sales, the calendars are sold out. The total expense for the calendars was \$1695 and the total revenue was \$2610 resulting in a net benefit to the club of \$915. I add my special thanks to Don Pullen for his amazing work on the calendar this year, and I also thank everyone who supported the club by buying a calendar.



Sky Calendar

- February 7 - Full Moon (Full Snow Moon or Full Hunger Moon)
- Moonrise at 5:50pm
- February 9 - Venus and Uranus 0.3 degrees apart (same telescope field)
- February 12 - Moon 3 degrees from Spica (early morning)
- February 21 - New Moon
- February 25 - Moon 3 degrees from Venus (spectacular sight!)
- February 26 - Moon 4 degrees from Jupiter
- February 29 - Last week of February and first week of March, Mercury low in west
(Best chance to see Mercury in 2012)
- March 1 - First Quarter Moon (there is no first quarter moon in February, but there were 2 in January and 2 in March!)

Monoceros

Last month we looked at the small but interesting (and ancient!) constellation of Triangulum, and at the HAA's general meeting we talked about the equally inconspicuous (and ancient!) constellation of Lepus. This month, let's continue to study the small and often overlooked constellations with the constellation Monoceros. Often we associate the figures of the constellations with great mythological beasts and characters, and Monoceros is exactly that; a Unicorn! This time, however, it is not an old constellation at all, but a relatively modern one. Monoceros was named by the Dutch astronomer Petrus Planius in 1613, which is even after the time of Tycho, but contemporary with when Galileo was making his telescopic observations. The constellation appeared in 1613 on a celestial globe made by Pieter van den Keere, and then in 1624 in an atlas by Jacob Bartsch (Jacob was married to Johannes Kepler's daughter and was one of Kepler's assistants.) Of course, you don't need me to tell you that Monoceros is a unicorn. The name gives it away, as 'mono' means one (like a mono audio signal, compared to stereo) and ceros means a horn (like the dinosaur triceratops had three (tri) horns (cera)). So Monoceros literally means 'One Horn'. And of course uni (meaning one, like a unicycle) and corn (meaning horn, like a cornucopia) means 'One Horn' as well. No translation needed; Monoceros literally means Unicorn.

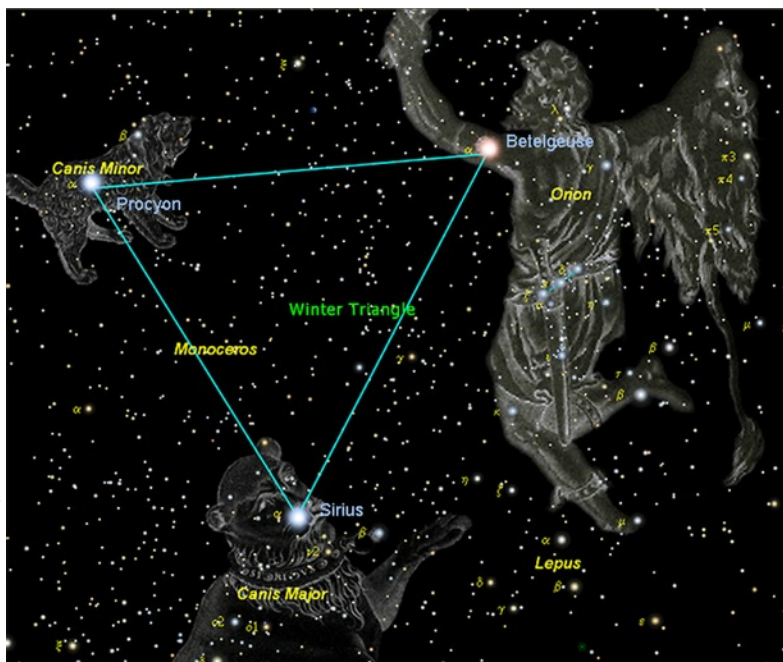
As we think back to the warm nights of summer (sigh!) we naturally think of the Summer Triangle dominating the night sky. In the winter, we think of not just a triangle, but the many bright stars that are displayed high in the south on a cold February night. Stars from Orion, Gemini, Taurus, Auriga, Canis Major and Canis Minor make up a nice hexagon, or an asterism sometimes called the "Winter G". If we think of just three bright stars though, Betelgeuse, Sirius and Procyon, we can see that they make up a triangle very much like the Summer Triangle. This Winter Triangle, though, is often lost amidst the many other bright stars of winter. Let's look at their triangle though, and imagine the space inside it. This space is filled with the constellation Monoceros. So, although Monoceros is a faint constellation with no stars brighter than 4th magnitude, it is actually quite easy to find.

Usually the brightest star in a constellation is the Alpha star (I suppose that means that Sirius in Canis Major is the 'Alpha Dog'). In the case of Monoceros though, it is actually Beta Monocerotis that is the brightest star of the constellation, although that is a dubious honour, since it shines at only magnitude 3.7. It is worth finding though, by looking about a third of the way along a line from Sirius to Betelgeuse. Telescopic observers will be rewarded with a lovely multiple star. All *(Continued on [page 9](#))*

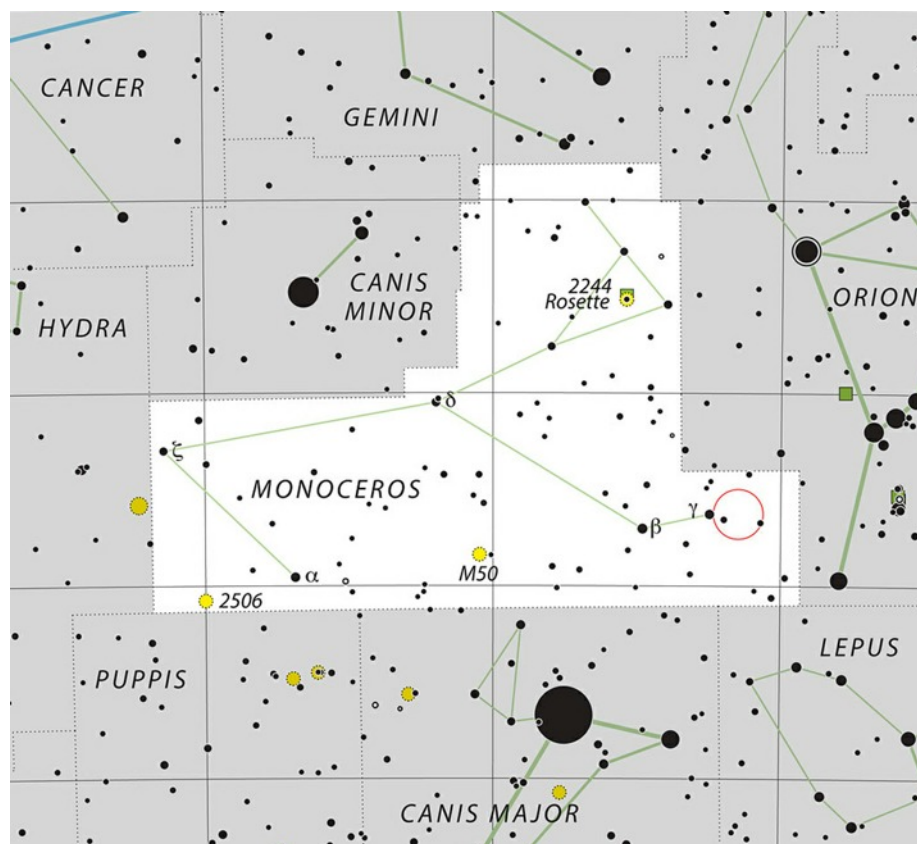
The Sky This Month (continued)

three stars are about magnitude 5 or 6 and all are the same spectral class (B3), so they should all look to be the same whitish colour. If your telescope can split the tight trio at a separation of only 7" (arcseconds) and 3", you can tell me what colours they appear to you. Use high magnification to help separate this fine triple. William Herschel called it "one of the most beautiful sights in the heavens" when he discovered it in 1781, the same year he discovered Uranus.

If we now follow a line from Sirius to Procyon, about a third of the way along we come to M50, one of the many, many open cluster that populate this part of the sky. Do the bright stars in this cluster look like a heart to you? Some have said so, but often this requires some imagination. There are many faint stars in this magnitude 5.9 cluster, so again, a good size telescope will help bring them out, but any scope or even binoculars will show this gem.



The Winter Triangle



Some of the gems to be found in Monoceros.

There is another open cluster in Monoceros that we must look at, and that is NGC 2244 (I'm terrible at remembering NGC numbers, but even I can remember this one!). On a line a little more than a third of the way from Betelgeuse to Procyon, this cluster is bright enough to be seen with the unaided eye if you have a very dark sky and a clear night. Through a telescope it is a large and rich open cluster with a bright member, the yellow star 12 Monocerotis. For the more daring telescope observer, there are even more wondrous things to be seen here. NGC 2244 is nestled in the heart of the Rosette Nebula. Always beautiful in photographs, it has a low surface brightness and so is challenging to observe at the telescope. Certainly it is helped by using nebula filters. It is a big object, so use the lowest power eyepiece that you have and a broadband nebula filter (like a deep sky filter) or a narrowband

(Continued on [page 10](#))

The Sky This Month (continued)

(like a UHC filter) if your telescope can handle it. The faint wisps of the Rosette will be worth it.

So Monoceros is a faint constellation filled with rich deep sky objects. The constellation is easy to find, snug in the Winter Triangle, and the three fine sights I have talked about here are all easy to find, each on being on a line from one of the Winter Triangle stars to another. So when you're out looking at the sapphire and ruby gems of the winter sky, like Sirius, Rigel, Betelgeus, Aldebaran and Procyon, remember these fine diamonds in the rough that are hidden in the magical Monoceros.



This stunning photo of the Rosette Nebula was taken by Kerry Ann Lecky-Hepburn.



HAA Helps Hamilton

To support our community, we will be collecting non-perishable food items and cash for local food banks at our general meetings. Please bring a non-perishable food item to the meeting or a donation of cash and help us help others in these tough economic times.

If you would like to help or have any questions about this new initiative, please contact Jim Wamsley at 905-627-4323.



For Sale

Coronado 40mm f/10 hydrogen-alpha Personal Solar Telescope (P.S.T.) with original 20mm eyepiece, owner's manual/instruction brochure and Coronado hard case.

With solar activity on the rise and the upcoming transit of Venus, this hydrogen alpha solar telescope is a must-have for every amateur astronomer.

Price: \$400.

Contact Ann Tekatch
Email: tekatch@sympatico.ca
Phone: 905-575-5433

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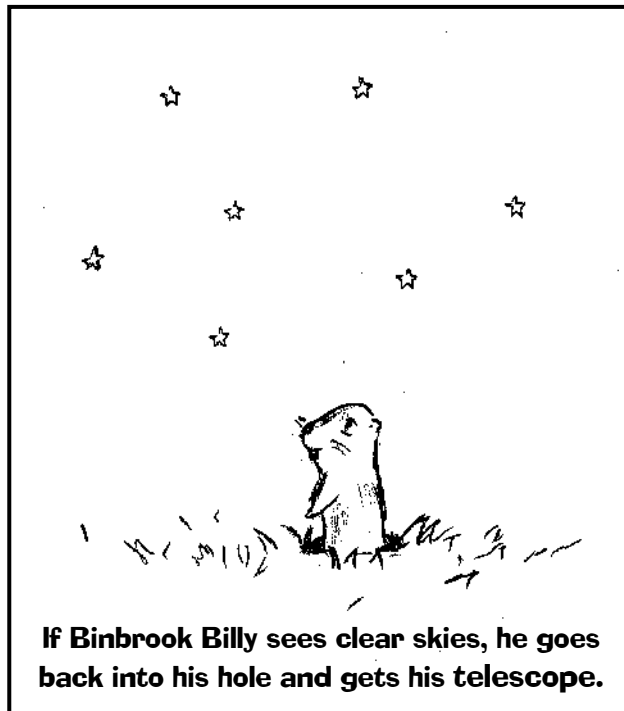
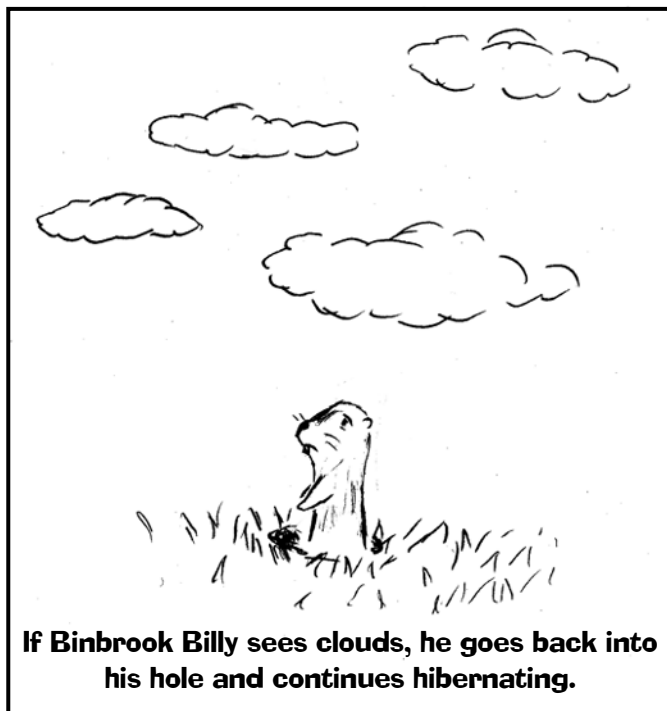
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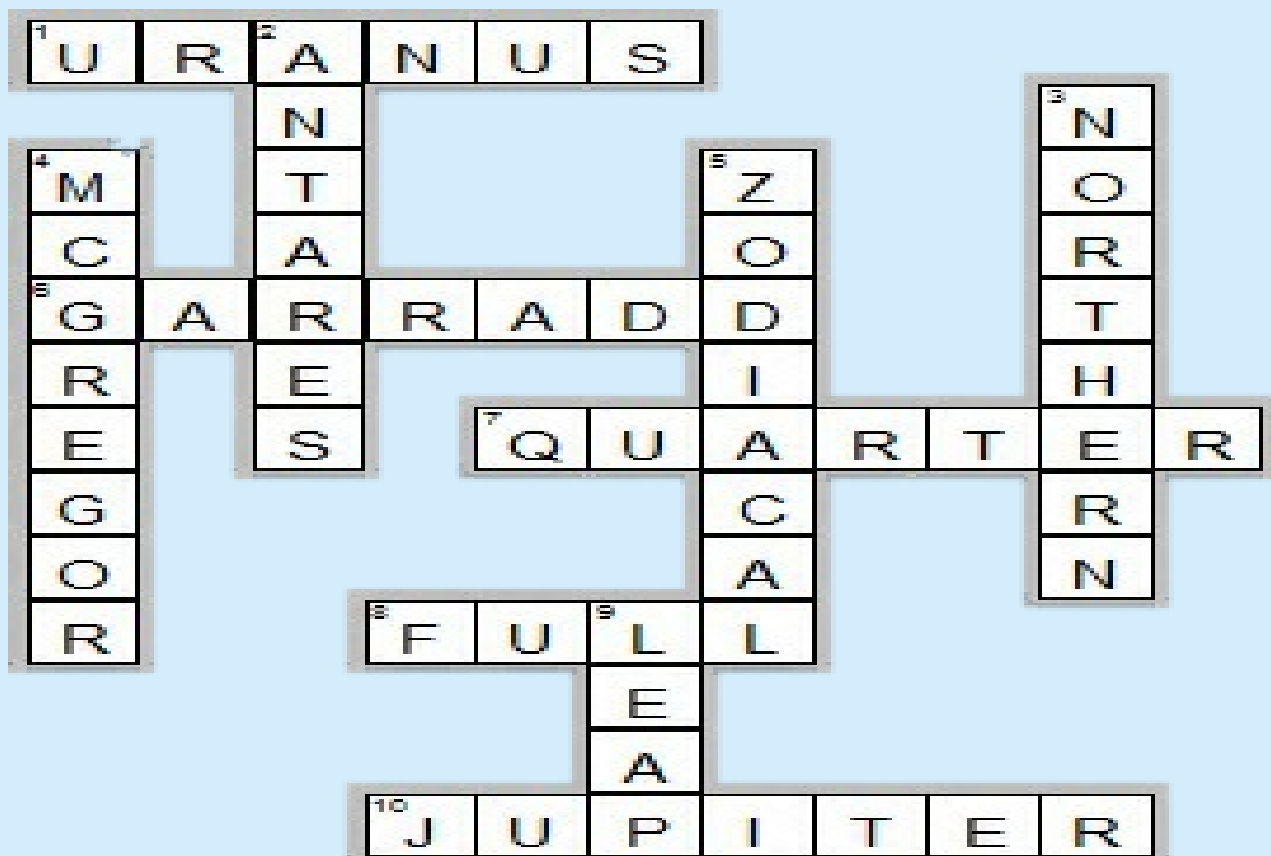




Groundhog Day - Astronomy Version



Answers to Astronomy Crossword on Page 9



UPCOMING EVENTS

February 4, 2012 - 7:30 pm. Astronomy Book club meeting. Discussion will be about the book "Flatland". Contact Mario Carr (mariocarr@cogeco.ca) for directions, etc..

February 10, 2012 - 7:30 pm General Meeting at the Hamilton Spectator Building. Speaker will be Ian McGregor of the Royal Ontario Museum. Topic: Maya Cosmology and 2012.

2011-2012 Council

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Observing site for the HAA provided with the generous support of the

Binbrook Conservation Area

Come observing with the HAA and see what a great location this is for stargazing, a family day or an outdoor function.

Please consider purchasing a season's pass for \$79 to help support the park.

<http://www.npca.ca/conservation-areas/binbrook/>
905-692-3228

