Event Hamilton Amateur Astronomers

Summer 1998

Volume 5 Issue 9

Archer Yi and the Ten Wild Suns

ince the universe began, there has existed on the edge of the Eastern Sea, a place known as Tanggu. In that place, there is a tree. Fusang is its name.

Fusang is a mighty tree ten thousand rods tall. At its very tip, a jade cock perches. This celestial bird crows when it is time for each new day to begin and its voice is echoed by other cocks all around the world.

In ancient times, the ten sons of the Heavenly King Di-Jun and his Queen Yi-He also lived in this tree. Each morning, the celestial queen would harness six jade dragons to a beautiful chariot. Then she would drive the chariot across the sky with one of her sons seated behind her. In this way, they provided the world with heat and light.

Each day a different brother would ride in the chariot. Yet after ten thousand years of service, they became weary of their duty. Each son began to grumble whenever it was his turn to light up the vault of the heavens.

"Our lives are boring," they lamented, as children will. "We never have any fun!"

One day, the brothers decided that

enough was enough. Early in the morning, just as their mother was hitching up the jade dragons, they sprang from the tree all at once and rushed out into the sky. Queen Yi-He called and waved her arms. She cajoled and scolded. But none of the suns heard her. They were too busy laughing and chasing each other across the sky.

Years passed and the earth was racked by terrible suffering. Rivers dried up and crops withered in the fields. Those people who did not succumb to the heat or die of starvation watched helplessly as fires raged and thirsty monsters crept out of their lairs to prowl the land and drink their fill of human blood.

King Di-Jun was greatly dismayed by the suns' disobedience and the suffering they caused. He sent for a celestial being named Yi, a member of Di-Jun's court and a mighty warrior. The heavenly ruler bade Yi to pursue the suns and bring them back to Fusang. Yet Di-Jun was an indulgent father who loved his children, so he asked the warrior to avoid using force against the brothers.

The king gave Yi a red bow and a quiver of magical arrows. "If you threaten them with these, my sons will surely see reason," he said.

So Yi bade farewell to the court and descended to earth with his wife Chang-E. When Yi saw how parched and desolate the earth had become, he was moved to tears. Especially terrible was the people's bitter hatred of the ten suns.

Yi wasted no time in fitting an arrow to his magic bow and drawing it. He called out to the suns and warned them that he was about to shoot. But the brothers were so spoiled, so full of their own power that they merely stared at Yi as if daring him to take action.

As Yi stood there with the bowstring taut, his patience drained away. It was replaced by such a terrible anger that he forgot Di-Jun's orders and released the arrow. It whistled through the air and struck one of the brothers in a shower of sparks. The ill-fated brother weaved through the sky as if drunk before plummeting to earth.

Yet the nine remaining brothers were not cowed by this. Instead, they became vengeful, spitting tongues of flame at the place where Yi stood and zooming towards him as if to reduce the warrior to ashes.

So Yi nocked another arrow and shot down another of the suns. With

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Chair's Report

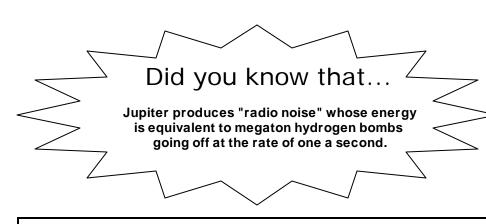
Some of you will be reading this summer issue of Event Horizon at Starfest. I hope that everyone has had an astronomy filled summer so far whether or not you attended one of the many star parties in Southern Ontario and New York State. We got off to a great start with our own HAA Star Party at Silent Lake in June. For details see my article elsewhere in this issue.

It's unfortunate that the next two star parties were held on the same weekend in July. It was a choice between the darker skies of North Bay and the relatively mosquito free Huronia Star Party. I can't tell you about the star party at North Bay but Huronia was very successful this year. We had three clear nights in a row with reasonably dark skies. Saturday night was especially nice. The featured evening speakers were Paul Delany from York University on Friday night and Terrance Dickenson on Saturday night. Both talks were excellent. Look for a repeat performance of Paul Delany's talk at our own HAA meetings in the coming season.

In case any of you have forgotten, we are having a photo contest for a colour cover on our fifth anniversary edition of Even Horizon in November.

It's a bit late to use at most of the summer's star parties but I have included a camping/observing checklist that you should find useful. If you think that I have missed any items from the list please let me know.

> Stewart Attlesey attlesey@interlog.com



Editorial

S ince Tracy Webb has gone to the University of Toronto to pursue a PhD, I have taken over the position of editor.

Putting together this special issue of the Event Horizon was a lot of fun, and I would like to thank everyone who sent in articles. The deadline for submission of articles for the September newsletter is Friday, September 4th. Articles and pictures can be e-mailed to me, or you can call me for other methods of getting your article or picture into the newsletter.

> Rosa Assalone 540-8793 assalor@mcmaster.ca



vent Horizon is a publication of the Hamilton Amateur Astronomers (HAA).

The HAA is an amateur astronomy club dedicated to the promotion and enjoyment of astronomy for people of all ages and experience levels

The cost of the subscription is included in the \$15 individual or \$20 family membership fee for the year. Event Horizon is published a minimum of 10 times a year.

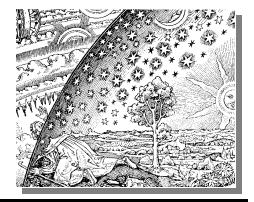
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HAA Fall Star Party - September 18-20

e've decided to have a second HAA star party at Silent Lake Provincial Park in September. The campground is very picturesque and should be especially so this time with autumn approaching. There is plenty to do at this park, including hiking, canoeing and swimming, even bike riding seems popular there. You can also explore abandoned mines in the area, and the town of Bancroft, "gem capital of Ontario", is about ten or so minutes up the road. The campsites are set within the woods which means you can sleep in in the mornings after a night of observing without the sun blazing down on your tent. This means, however, that to do astronomy we have to go to the parking lot of the day-use area near the front gate, so be prepared to put your telescope up and take it down again each night.

Silent Lake Provincial Park is located on Highway 28, north of Peterborough. It's takes about 3 1/2 to 4 hours to drive there. From Toronto, take Highway 401 east, past Bowmanville, to Highway 115. Then take Highway 115 north to Peterborough. Driving through Peterborough you want to pick up route 29 north (previously called Highway 28), but the city is poorly signed for this, and you can easily get lost here. You might just have to stop and ask for directions as necessary. I think almost all of us got lost in Peterborough last time, but, as far as I know, we all made it eventually to the star party! North of Peterborough, route 29 eventually becomes Highway 28 again. Follow Highway 28 past Lakefield (stop in Lakefield for ice-cream in the icecream parlor on the north side of bridge, opposite the war monument as I recall) and past Apsley till you come to Silent Lake. The best plan is to have an Ontario road map which is as up-to-date as you can find, one which shows Route 29 going north out of Peterborough.

It won't be necessary to reserve a campsite this time. Stewart Attelsey has suggested that when you arrive at the park to check the bulletin board at the gate to see where others are camping and/or to post a notice of your own to say where you are camped. The regular campsites in the loop containing sites 49-58 where some of us camped last time were very nice, and this area has a full service washroom facility with free showers close by. There is also an area for trailers which has electrical hookups in a different part of the park.

If you would like to reserve your campsite call (613) 339-2807. The fee is \$17.75/night, plus a \$6.00 reservation fee. You'll need to provide your credit card number, but you can pay by cash at the park when you arrive. For more information about Silent Lake, call the Ministry of Natural Resources at

(416) 314-2000.

If you have any questions, please contact me at (905) 846-8990, or by e-mail at bx057@torfree.net.

Remember that you don't need a telescope to attend the star party. Other members are always willing to let others experience the awesomeness of the night sky as seen through their equipment and to share their expertise and experiences. And don't forget, as Terence Dickinson always reminds us, binoculars are an excellent and recommended tool for learning about the night sky. Hope to see you there.

Juliana Light

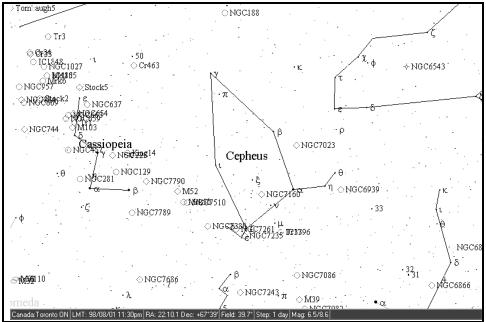
Constellation of the Month: Cepheus

by Margaret Walton

Cepheus is the King of Joppa. He is the husband of Cassiopeia and the father of Andromeda. In the sky, Cepheus lies beside his wife Cassiopeia and Draco. The constellation looks like a simple drawing of a house with four sides and a steep roof. Its midnight culmination is at the end of August. between 3.6 and 5.1.

VV Cephei - This is an eclipsing binary with a period of 7430 days. It is one of the largest known stars and is orange in color. It has a smaller blue companion star.

Alpha Cephei - This star lies near the path traced by the Earth's axis in space and will replace Polaris as the



Stars

Delta Cephei - This is the original Cepheid variable. It was discovered to be a star of this type in 1784. It is a yellow supergiant with a diameter 25-30 times that of our sun. Its magnitude varies from 3.5 to 4.4 in 5 days, 9 hours. It has a blue 6th magnitude companion.

Mu Cephei - This is called the Garnet Star and is one of the reddest of all the naked eye stars. It is also a variable, with a magnitude pole star. It will be closest to the Pole about 7500 A.D..

Objects to see in Cepheus

NGC 188 - This is the oldest known galactic star cluster with an estimated age of 12-14 billion years. It is 5000 light years away and contains about 120 stars. It is a large, rich cluster with a magnitude of 8.1.

NGC 2276/2300 - This is a pair of interacting galaxies. 2300 is bright, large and slightly elongated. 2276 is large and faint with many arms.

NGC6939 - An open cluster of about 80 stars with a magnitude of 7.8.

NGC6951 - A bright, large, slightly elongated galaxy.

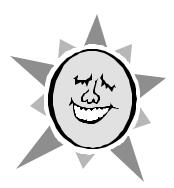
NGC7129 - A large, loose open cluster of 10 stars involved in faint reflection nebulosity.

NGC7142 - A large, rich cluster of about 100 stars. It has a magnitude of 9.3.

NGC 7510 - A rich, fan-shaped cluster of about 60 stars with a magnitude of 7.9.

NGC7822 - A large, faint arc of nebulosity, possibly a supernova remnant.

IC1396 - A cluster of 50 stars involved in faint emission nebula. It has a magnitude of 3.5.



HAA Sweatshirts & T-shirts

G ood news! The sweatshirts and Tshirts will be ready and available at Starfest. If you ordered a shirt, you will be able to pick it up from Stewart Attlesey or Margaret Walton at Starfest during the weekend of Aug.20-23.

The remaining shirts can be picked up at our first meeting in September (Sept. 11) at the Spectator Building, or you can call me to arrange to pick them up at my place before then.

If you didn't order a shirt, there are a few still available and they will be for sale at the Sept. 11th meeting on a "first come, first served" basis.

> Ann Tekatch 575-5433

- September 14th, 8pm
- 🛣 'A Naturalists' Guide to Star
- 😓 Gazing'
- by Terence Dickinson
- ☆ _ _ _
- A Free Presentation by The
- Hamilton Naturalists' Club
- Royal Botanical Gardens

Headquarters 680 Plains Road West Burlington

Please join us - everyone is welcome.

study, appreciation and conservation of wild plants and animals. Everyone is welcome to attend our monthly meetings.

profit organization dedicated to the

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- 5
- 25

Our club is a 500 member non-



he next meeting of the Hamilton Amateur Junior Astronomers will be Monday, September 21st, 1998 at 7pm. All children between the ages of 4 and 12 are welcome to attend.

If you require more information, or if you are interested in helping with HAJA once a month (it is lots of fun!), please contact Rosa at 540-8793

Wild Suns...

(Continued from page 1)

two of them gone, the air was noticeably cooler. The people gathered around Yi, cheering him on and praising his skill with the bow.

When the third sun fell to earth, the remaining brothers at last became frightened. "Run," they shouted to each other. "He means to end our lives!"

But the people pleaded with Yi. "Don't spare them! If you do, they will return to wreak havoc once again."

So Yi fired until his quiver was empty and only one sun remained in the sky. The last brother fled to Fusang and hid there for a few days. During that time the rains came to fill

the rivers and bring life to the parched earth.

After that time, the sun rode quietly in the back of his mother's chariot. He served the people 365 days a year and never again made mischief in the sky.

When the people saw that the sun was sincere about his duties, they at last put away their hatred.

A Chinese legend transcribed by Denise Kaisler <u>kaisler@astro.ucla.edu</u>

HAA Star Party '98

oon after we formed the HAA we decided to have our own "star parties" but with a difference. There would be no registration fees, no speakers, no swap table and no Saturday night roast beef dinner. It would just be a group of people getting together to enjoy observing. Our first star party was held at Silent Lake south of Bancroft, Ontario, Everyone enjoyed the dark skies but it was quite a drive and there were plenty of mosquitoes. For the next three years we held our parties at the York Soaring Club near Arthur, Ontario. The Soaring club was more convenient but we didn't have the best of luck with the skies and a neighbour who likes floodlights. As a result we decided to return to Silent Lake this year.

Without a doubt the HAA's 1998 star party was the best ever. Once the Sun finally went down on Friday night the view of the Milky Way made it worth the long drive and the mosquitoes. I should explain why I said "finally". Due to the numerous star parties held throughout the summer in Ontario and New York State we have little choice but to hold ours in June. This year our weekend coincided with the Summer Solstice, which has the shortest night of the year. It's amazing how long it takes for the glow in the north sky to disappear at the Solstice. We had some brief patches of cloud on Friday night but they cleared away before we considered packing up. During the day on Saturday there were quite a few clouds and some of us had to endure a twenty-minute downpour. That Saturday night the sky started off cloudy but fourteen of us gathered near the lake in the day use area anyway in anticipation. While we waited we were treated to the excellent guitar playing of John McLoy. Muskol stocks rose that day due to the efforts of Bill Tekatch to

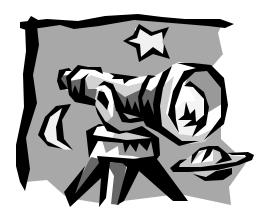
chase away the mosquitoes. I had a more environmentally friendly solution called a bug jacket. A certain unnamed member who has undergone a temporary nine month weight gain referred to it as a geeky bug jacket but I think that she was just envious. One interesting effect of wearing the jacket was the diffraction patterns that could be seen around bright stars. As you have probably surmised I needed to unzip the hood to do some serious viewing.

To give you some idea of how good the skies turned out, I was able to finally see an object that has eluded me for some time. Everyone is familiar with the globular cluster M13 in Hercules and many of you have seen the nearby magnitude 12 galaxy NGC6207. The object that I was trying to locate is a magnitude 15.5 galaxy, IC4617, located between these two objects. You can imagine that if such a faint object can be found (albeit in a 20" scope) the brighter objects such as M13 could be seen in greater detail also.

The campgrounds are almost perfect for our star party. The camping sites are well spaced and in the shade so you can sleep late after a long night. Purists might say that it wasn't real camping at Silent Lake due to the hot showers and flush toilets! I should also mention that Silent Lake lives up to its name; it really is quiet there. No motorized boats are allowed but you can rent a canoe. If you are looking for something else to do during the day, there are many hiking trails to explore. In addition, you don't have to travel very far to do some rock hounding. The Bancroft Chamber of Commerce has a complete list of locations and you can even rent a rock hammer from them.

And now for some good news, we had such a positive experience that we are going back for the September 19th and 20th weekend. This should be even better than in June since the Sun will be setting much earlier and NO MOSQUITOES! The only caution is that you need to be prepared for some potentially cold nights. They don't take reservations this late in the season so all you have to do is show up. If you are the first one to arrive post a notice on the bulletin board to show which campsite you have chosen. Silent Lake is easy to find since the entrance is right on Highway 28 about 30 Kilometres south of Bancroft.

Stewart Attlesey



Camping/observing checklist

Observing Equipment	Camping Equipment	Camping Equipment
Telescope	Tent	Kleenex
Eyepieces	Sleeping Bag	Cooler
Telrad/Finder Scope	Air Mattress	Ice Packs
Collimating Tool	Sun Shade for tent	Ice
Red Flashlight	Pillow	Personal Care (i.e. Soap)
Batteries	Floor Brush	Scissors
Star Charts	Blanket	Fan
Books	Paper Towels	Mat
Binoculars	Duct Tape	Ear Plugs
Camera	Hammer	Sunscreen
Film	Stove	ground sheet
Tripod	Matches	propane
Cable Release	Pots/Pans	
Chairs	Knife, Fork, Spoon	Clothes
Table	Sharp Knife	Jeans
Solar Filter	Cup, Bowl, Plate	Raincoat
White Flashlight	Food	Shorts
Tarpaulin/Sun Shade	Drinks	T-shirts
Bug Repellent	Water Jug	Socks
notebook/pencil	Can Opener	Underwear
Miscellaneous	Thermos	Long Johns
Prescriptions	Dish Detergent	Jacket
Sunglasses	wash cloth/towel/dish cloth	Boots
Money	dish sink	Hat

CALENDAR OF EVENTS

- Friday, September 11th, 7:30 PM
 - Monday, September 21th, 7:00 PM HA
- September 18, 19, 25, 26, 8:00pm

HAA GENERAL MEETING - At the Spectator Building auditorium. HAJA MEETING - McMaster Burke Science Building, room B148. For more information contact Rosa Assalone at 540-8793.

BINBROOK OBSERVING NIGHTS - For confirmation or directions call Tony Wallace at 526-6154.