



Current
Astronomy

JUNE
2004

RIVER BEND ASTRONOMY CLUB NEWSLETTER



Examining nature close-up as a professional microscopist by day, Mike Veith surveys the universe as an amateur telescopist by night. Here he calibrates the tracking system in his compact electronic telescope. PHOTO BY ERIC YOUNG

RIVER BEND



ASTRONOMY CLUB

RIVERBENDASTRO.ORG

River Bend Astronomy Club serves astronomy enthusiasts of the American Bottom region, the Mississippi River bluffs and beyond, fostering observation, education and a spirit of camaraderie.

Officers and administrators

PRESIDENT	Gary Kronk kronk@amsmeteors.org
VICE-PRESIDENT	—
TREASURER	Ed Cunnius ecunnius@att.net
LEAGUE CORRESPONDENT	Jamie Goggin jamie.goggin@ugsplm.com
SECRETARY	Eric Young younger@wustl.edu
ASTRONOMY DAY COORDINATOR	Mark Brown loneastronomer@charter.net
LIBRARIAN	Lois Butler tenbyfifty@starband.net

Contacts

MAIL 132 Jessica Drive, St. Jacob, IL 62281

WEB riverbendastro.org

E-MAIL riverbendastro@att.net



Affiliated with the Astronomical League, dedicated to fostering astronomical education, providing incentives for astronomical observation and research, and assisting communication among amateur astronomical societies.
www.astroleague.org



Affiliated with the NASA Night Sky Network, a nationwide coalition of amateur astronomy clubs bringing the science, technology and inspiration of NASA's missions to the general public.
nightsky.jpl.nasa.gov

Current Astronomy CLUB NEWSLETTER

EDITOR Eric Young
younger@wustl.edu

Submissions to the newsletter are encouraged.
Contact the editor for more information.

Events

JUNE MEETING

Saturday, June 19th, 2004 • 7:00 p.m. •

Kronk Observatory

132 Jessica Drive, St. Jacob, IL 62281

Looked up lately?

Join River Bend Astronomy Club

Want to learn more about astronomy? The members of River Bend Astronomy Club invite you to join. You won't need expensive tools or special skills — just a passion for observing the natural world.

- Meetings offer learning, peeks through great telescopes and fun under the stars.
- You will receive the club newsletter, *Current Astronomy*, packed with news and photos.
- Get connected with our member-only web site and discussion group.
- And that's not all! Through club membership you also join the Astronomical League, with its special programs and a colorful quarterly newsletter to enrich your hobby.

We meet monthly, observe regularly, e-mail news and quips constantly, and generally have a good time. Won't you join us?

Name(s) _____

Address _____

City _____ State _____ Zip _____

Phone (Day) _____ (Evening) _____

Email address (to receive club news and information):

Where did you hear of our club?

How long have you been interested in astronomy? _____

Do you have optical equipment? Telescope Binoculars

Are you afraid of the dark? Yes No (just kidding)

I am submitting my application for:

_____ Adult membership(s) _____ Youth membership(s)
@ \$10.00/year @ \$8.00/year
(18 years or older) (under 18)

I enclose a check for a total of \$ _____
made out to "Ed Cunnius, Treasurer RBAC."

Signature _____

Date _____



River Bend Astronomy Club

c/o Gary Kronk, 132 Jessica Drive, St. Jacob, IL 62281

web: riverbendastro.org e-mail: riverbendastro@att.net

MAY04

Lost and found

How a comet entered its rightful place in history

BY GARY KRONK

You just never know when a piece of historical information might be useful at a later date... no matter how unimportant it might seem at the moment.

That was my thinking back in the late 1970's, when I began methodically researching comets. Before long I realized that more comets were reported than actually appeared in the catalogs. Why the discrepancy? There was a class of comets that were simply labeled as "unconfirmed," which included comets found on single photographs and comets which were visually detected but poorly observed or poorly reported. My goal was to collect the information on these unconfirmed comets and catalog them for future researchers.

I wondered how many of these might be real comets. If they were periodic comets, then they would one day return and a link to these old observations might be made.

Although most of the interesting unconfirmed comets appeared in print as soon as they were announced in order to encourage astronomers to look for them, one observation I uncovered was never reported in official publications. Who would have guessed what a difference this observation would make over 20 years later.

The Reverend Leo Boethin observed from his home in Bangued, a small town in the Philippines.



The Reverend Leo Boethin, a parish priest in the small town of Bangued in the Philippines, looked forward to his comet hunting. His priestly duties kept him busy during the day, but he always found time to relax on clear evenings before going to bed. He also made a point to wake up before sunrise to get in an hour or so of comet hunting. The routine helped prepare him for the day ahead.

On January 12, 1973, Boethin was sweeping for comets with his 8-inch reflector. A comet hunter since 1970, Boethin had found nothing — until about 4 a.m. on this particular morning. At that moment, his methodical sweeping revealed a diffuse object, some 7' in diameter. He estimated the magnitude as 9.5 and carefully measured its position.

During this particular session, Boethin knew he was fighting the clock with morning twilight approaching. He quickly checked his star charts and found no known deep sky object in that position. Just as the first signs of twilight appeared, he checked one last time and easily found the object, which showed no signs of having shifted its position as would a comet.

The next morning, Boethin woke shortly before 4 a.m. and quickly found the diffuse object from the night before. The object still glowed at magnitude 9.5, but the coma was slightly larger at 8' in diameter. Curiously, the comet still sat among the same field of stars, but a careful measurement revealed it had moved since the previous morning. Boethin knew what he'd found. This was a comet.

Back then the proper method for notifying the authorities about comet discoveries was to send a telegram or cablegram to the Central Bureau for Astronomical Telegrams. (Today, e-mail makes worldwide notification instantaneous.) Unfortunately, Boethin's duties started before businesses opened in Bangued and nearby towns, and it continued long after these businesses closed. So, he did the next best thing — he wrote a letter.

Brian G. Marsden, director of the Central Bureau, received the letter a week later, at which time a bright moon was illuminating the morning sky. As with all comet discovery reports he received, he asked some of the sky patrol teams to verify the comet. A group in Japan made an attempt, but the moonlight limited the length of their exposures and they were not able to detect stars fainter than magnitude 13. No comet was detected.

Two days after receiving the first letter, Marsden received another letter from Boethin containing a third observation: Boethin had seen the comet again on the morning of January 14. The comet had faded to magnitude 13 and his carefully measured position indicated a slow but very steady motion. Boethin added that moonlight hid the comet from view on the following morning.

With no independent confirmation, Marsden had a tough decision to make. Was the comet real? If so, it should be formally announced. Or was this just another of the dozens of false comet discovery announcements received by the Central Bureau every year? Possibly. Marsden decided not to announce Boethin's "object."

Flash forward to 1975, when Boethin reported the observation of a 12th-magnitude comet-like object to the Central Bureau. His announcement once again came in a letter and reported positions for January 5, 7, and 8. As in 1973, the letter arrived at the Central Bureau just as the moon began interfering and there were no reports of independent confirmation. Boethin recovered the object on January 29 and February 1, after the moon had left the sky. This time he sent a speedy cablegram to the Central Bureau. They received confirmation from other observers beginning on February 5. It turned out to be a periodic comet — now officially known as 85P/Boethin.

The unsettled story of Boethin's first discovery would probably have ended in the file cabinets of the Central Bureau, as so many unconfirmed comets have. But my pawing through the files of comet history uncovered a meager reference to the object during the early 1980's. I was then gathering information on the 1975 discovery, periodic comet 85P/Boethin, when I stumbled across a brief statement that said Boethin had lost a comet in 1973 because of poor communication.

Was the comet real? If so, it should be formally announced. Or was this just another of the dozens of false comet discovery announcements received by the Central Bureau every year? Possibly.

While I collect information on well-known comets, I have also always collected any detail I can on unconfirmed comets. Unfortunately, the brief statement that referred to Boethin's 1973 comet was not much to go on. I needed the actual dates of observation and, if available, position measurements and magnitude estimates. So, I wrote to Boethin in October 1987.

A month later I received a reply dated October 14, 1987. The letter included a photograph of Boethin as well as the details of his 1973 discovery. I was surprised to see that he had measured positions on three days, because this is the number of positions needed to calculate an orbit. I was particularly struck by the sudden drop in brightness on the last night. Such changes are rare among comets, and astronomers have been trying to figure out the reasons for such drastic changes for over a century. Unfortunately, there was nothing more I could do, other than simply put the information in my computer. Boethin's data was back in a virtual file drawer.

My first chance at investigating Boethin's 1973 comet came in 1990 when finished writing a FORTRAN program to calculate comet orbits. After confirming my software's accuracy with several known comets, I took the three positions provided by Boethin and tried to fit them to an orbit. I was unsuccessful. Despite Boethin's care in measuring the positions, an 8-inch telescope, such as the one he used, can't render the precision necessary to refine an orbit. In addition, the comet's very slow motion was no help and virtually magnified any uncertainties — plottings across a broader swath of the sky tend to minimize uncertainties. Back in the virtual file drawer went Boethin.

Another 13 years went by. The world wide web now offered a smorgasbord of comet data. Amateur

I sent an e-mail reporting a probable predisccovery observation by Boethin of comet 104P/Kowal 2... Days passed before I heard anything...

astronomer Kazuo Kinoshita, whose skills in celestial mechanics have been recognized by numerous professional astronomers, sent me the address of his web site which gives the past and future orbits of all known periodic comets. I suddenly had an idea.

I began copying and pasting Kinoshita's orbits for every periodic comet into a spreadsheet — nearly 2000 comet orbits. I then converted the entire database into a text file compatible with my favorite planetarium program, Sky Chart III. Once imported into Sky Chart III, I opened the document I had created some time ago containing the information on all unconfirmed comets. The list included the details of 137 objects, including Boethin's 1973 object.

My plan was to evaluate all comets that were within a couple of degrees of each object's position. My process was simple: Set Sky Chart III to the date of the observation, so that the program would calculate positions from all 2000 orbits for that moment in time. Next, center the reported position of each unconfirmed comet.

I spent two and a half days checking all 137 unconfirmed comets. Sometimes there were no comets close to a position, and sometimes there were several. But as I evaluated each possibility that appeared on the screen before me, my conclusion time and again was that a link was impossible — usually because the comet was far too faint since it had passed perihelion decades and even centuries earlier!

I finally progressed down the list to Boethin's 1973 object. I set the date and time of Sky Chart III to January 12, 1973 at 4 a.m. The location of the observer was set to Bangued. I centered Boethin's measured position and saw three comets in the 2-degree field. I was surprised to find that one comet was almost sitting on top of Boethin's position! Another false alarm? I clicked on the comet being displayed and the information box said it was periodic comet 104P/Kowal 2.

Comet 104P/Kowal 2 was "discovered" by Charles


T. Kowal in 1979. The 1973 position was generated by Kinoshita's predicted orbit for this comet's 1972 apparition.

I was now excited, but there was another test to be done. Boethin had measured three positions on three consecutive mornings. I now pulled out Boethin's original 1987 letter, carefully entered the precise time of the January 13th observation, and centered Sky Chart III on his measured position. Sure enough, comet 104P/Kowal 2 moved in exactly the right direction and at exactly the right speed. Boethin's January 14th observation was also a match.

All my life I've dreamed of "discovering" a comet and forwarding my own magic telegram to the Central Bureau. I never thought my discovery would happen vicariously by software. I sent an e-mail reporting a probable predisccovery observation by Boethin of comet 104P/Kowal 2, mentioning the likelihood that Boethin had found the comet while it was experiencing an outburst in brightness and that it had rapidly faded after January 13th. Days passed before I heard anything...the staff was out of town. Dan Green was the first to respond. He said he had told Marsden who was anxious to check this out.

More days passed before Marsden wrote to me. He said he pulled out the original 1973 correspondence between Boethin and himself, and assembled the times and positions from those letters. He then fed the positions into his computer, along with all of the known positions of 104P/Kowal 2, and tried to fit the two objects. He found an almost perfect match.

The Central Bureau announced the discovery on IAU Circular 8255 (2003 December 11). Thanks to a file drawer, a hard drive, and a little help from me, Boethin had two comets.

In his 1987 letter to me, Boethin said he was glad to have had an official comet discovery in 1975, but wished his 1973 comet had not been lost. He was absolutely certain of his three observations and felt a little embarrassed that the object had been labeled as "doubtful". Sadly, Boethin died on September 15, 1998, at the age of 86. Although he did not live to see this "doubtful" tag removed from his earlier comet, I am very happy to have convinced the astronomical world that Boethin's 1973 comet was undoubtedly real. 

Dawnings

Memories, like comets, can return

BY DEB WAGNER

“Wakeup, Hon.” I tried to shake off the remnants of sleep at the sound of my dad’s voice. “C’mon, Sweetie, we’re gonna be late.” It was early in the morning of April 7, 1970. I was 9-years old and my father was waking me for a journey that I wouldn’t fully appreciate until 34 years later. The journey began when our neighbors, John and Marie Harriman, invited my parents, my cousin, and me to come to their house and observe Comet Bennett.

We walked to the Harriman’s house in the darkness of the pre-dawn hours. The trek took us about a half-mile along a path through the woods. It was the first time I had ever been in the woods at that hour and it was amazing. The forest was peaceful and calm, a few crickets were chirping, and the leaves crunched beneath my feet as I walked.

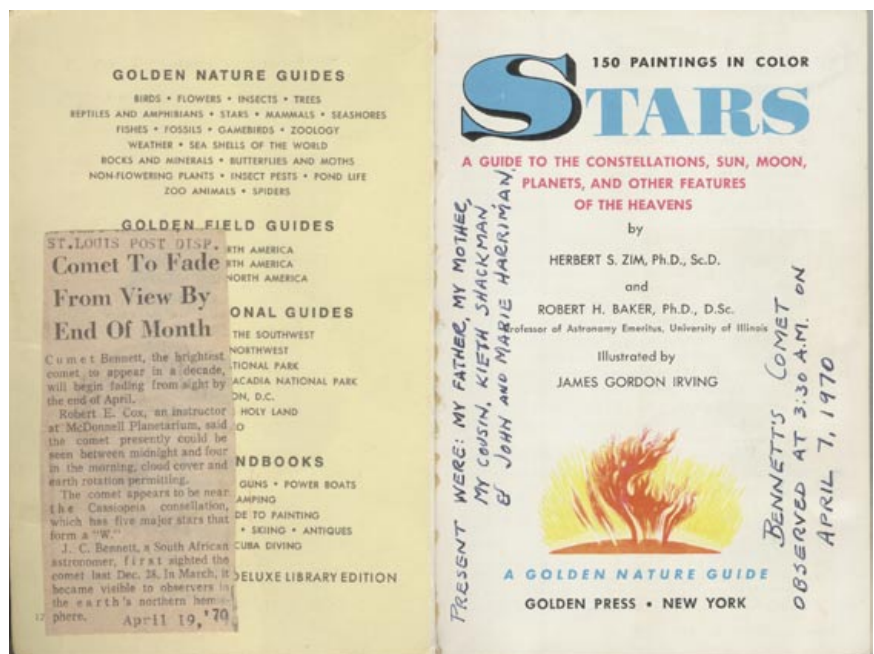
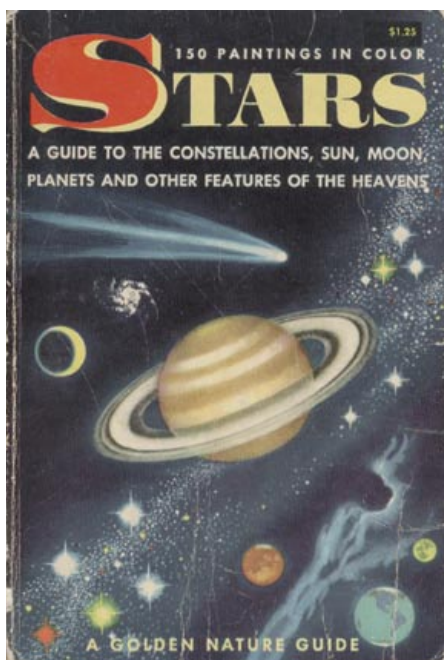
When we arrived, John and Marie had a telescope set up and were anxious to show us Comet Bennett. If memory serves me, the comet was bright and beautiful with a long, wispy tail. I realize, now, that the telescope

was a refractor, but I have no idea what size it was. It seemed large, but I was 9-years old — everything seemed large. When I looked through the telescope I could see a star shining through the comet’s tail. It was a magical sight.

A few weeks later, John and Marie presented me with my very first astronomy book, *Stars — A Guide to the Constellations, Sun, Moon, Planets and Other Features of the Heavens*. A small newspaper clipping about Comet Bennett was glued inside the front cover. Marie had inscribed the following on the title page:

PRESENT WERE: MY FATHER, MY MOTHER,
MY COUSIN, KEITH SCHACKMAN, & JOHN
AND MARIE HARRIMAN. BENNETT’S COMET
OBSERVED AT 3:30 A.M. ON APRIL 7, 1970.

I’ve always cherished that little book and it has made its own special journey from my childhood bedroom, to a box of keepsakes, and, finally, to its proper



A childhood keepsake of a memorable morning launched a life-long interest in astronomy for Deb Wagner.

place among the newer astronomy books in my library.

I would love to tell you that my experience with Comet Bennett led to a lifelong interest in comets or a rewarding career in astronomy. But, instead, my journey took me down a different path and didn't lead back to astronomy for nearly 30 years.

Recently, the journey that began in 1970 came full circle when Comet Bradfield appeared in the morning sky. It was a blaring alarm clock that awoke me — not the sound of my dad's voice. But, as I stood in the early morning darkness on April 27, 2004, and observed Bradfield's long, wispy tail, I was overcome with the memories of that other morning in April, 34 years ago, when I took my first glimpse into the universe. Of the six people who gathered to observe Comet Bennett, three — John, Marie, and my dad — are no longer with us. I won't attempt to explain the feelings that accompanied those memories, but I now have a better understanding of why that night at the Harriman's is so special to me and why I enjoy astronomy so much.

One of my pals in River Bend Astronomy Club, Eric Young, wrote this personal observation about Comet Bradfield:

“Meteor observers have reported hearing sounds: This morning another sense came into play. I can attest that Comet Bradfield smells like spring. With the comet low to the horizon, I had to leave my fenced observatory and set up in the grass. There the weeds grew tall and lush with recent rain; when I trampled them I gathered a pungent nasal impression of Bradfield in twilight.”

If Comet Bradfield smelled like spring, then Comet Bennett sounded like the forest at night: Peaceful and calm, a few crickets chirping, and the sound of leaves crunching beneath the feet of a 9-year old on her way to her first encounter with the wonders of the universe. Thanks, Dad, for waking me in time. [!\[\]\(a03a7eb2f4046e1d3c76772003e549ea_img.jpg\)](#)

Comet Bradfield appeared in the pre-dawn sky during late April 2004. The apparition, with its classic long tail pointing toward the yet-to-rise Sun, stirred many RBAC members from their beds before dawn.




GARY KRONK

Red Planet rendezvous

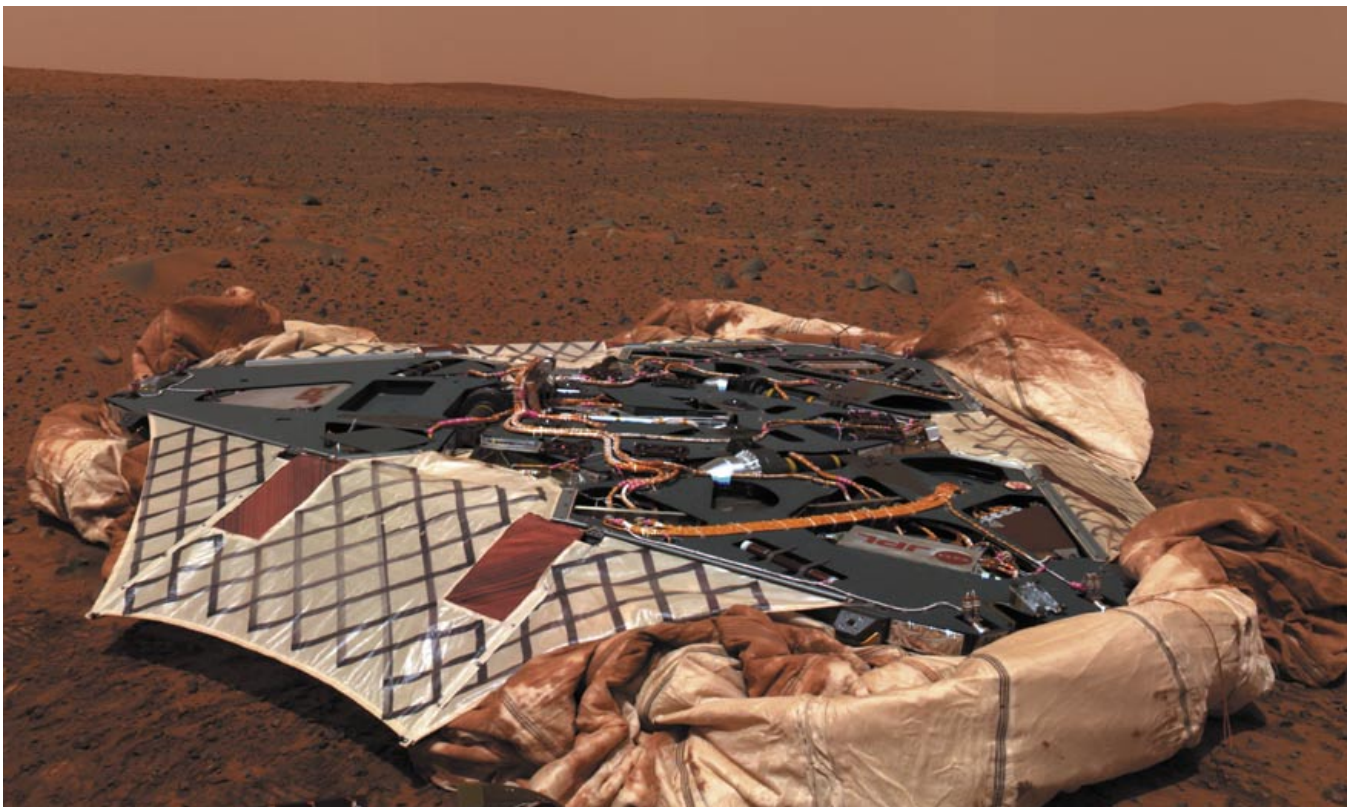
RBAC members send their kids on a one-way trip to Mars

BY ERIC YOUNG

Those who ponder Mars exploration and even its eventual colonization have long held fast the dream that one day their children or grandchildren would go there — living the furthest adventure saga in human history. The children of RBAC members Jace Perham, Jamie Goggin and Gary Kronk have already made it, if not in person then at least in spirit. Or should we say *on* Spirit. And on Opportunity, too.

The names Justin Donnellan, Noah Perham, Samuel Goggin, Ian Goggin, David Kronk and Michael Kronk joined nearly four million others collected by NASA in the “Send Your Name to Mars” project. Imprinted on special DVDs, the explorers vicariously navigated the trip to Mars and landed with the twin rovers Spirit and Opportunity. (Spirit’s “empty nest” on the planet’s surface is pictured below.) The only question is, how many times did the kids ask, “When we gonna get there?” 

At the center of the DVD (right) is a Lego “astrobot” that allows children to follow the mission via the diaries of Biff Starling and Sandy Moon-dust. Magnets on the outer edge of the DVD will collect dust for student analysis, and children can also decode the hidden message in the black dashes around the edges of the DVD. The DVD was provided and supported by the Planetary Society, the LEGO Company, Visionary Products, Inc., Plasmon OMS and the Danish magnet team.



NASA/JPL/CORNELL

Arc Minutes

BY ERIC YOUNG

The comets that bloom in the spring

MAY 15, 2004 Attendance: Tim Bucher, Rita Breeden, Bill Breeden, Mark Brown, Lois Butler, Jamie Goggin, Gary Kronk, Bruce Kryfka, Caroline Menz, Jeff Menz, Simon Menz, Terry Menz, Steve Mifflin, Jace Perham, Dennis Rippelmeyer, George Roethemeyer, Mike Veith, Deb Wagner, Eric Young, Mark Young. With Comet NEAT close by the Beehive Cluster (M44), everyone was psyched for a great view and maybe a memorable photograph. But Mother Nature had other ideas...we dodged clouds all evening.

MAKE A MENZ The **Menz family — Jeff, Caroline, Terry and Simon** — joined our gathering. They own a family-sized telescope and a family-sized star chart that unfolds as a picnic blanket in a pinch. “The scope is a 10” Meade LX5 Schmidt-Cassegrain,” says Jeff. “We bought it at an estate sale about 3 years ago. Quite a find, I must say! The drive gears need some repair, but the optics are fine.” Of the meeting, Jeff adds that, “We truly enjoyed ourselves. For my part, I no longer feel like the only one among my friends and family who understands and speaks in ‘astro-terms.’ It’s very satisfying to hear others use similar phrases as I have used for years — mine have received only blank stares from my audience!...”

“Thanks to all of you for the warm welcome we received. We are all looking forward to next month’s gathering.”

The Menzes invite us all to their place outside Highland to star-gaze and raid the fridge.

Prairie Skies Star Party

The Amateur Astronomy Events and Conventions Association (AAECA) will sponsor the Prairie Skies Star Party at Camp Shaw-Waw-Nas-See, near Kankakee IL, September 9–12, 2004. Contact: John Weber, Prairie Skies Star Party, prairieskies@ameritech.net, (708) 481-7970.

ASTRO DAY KUDOS We’ve received good feedback, including letters of thanks, from folks who attended our Astronomy Day celebration in April. Everyone deserves a round of applause for sticking it out when it seemed like the rain would wash guests away. The club presented a certificate of appreciation to **Mark “Rainmaker” Brown**, also known as Mr. Astronomy Day, for his tireless efforts and infectious enthusiasm. (By the way, send Mark copies of local press coverage of the event — the club is submitting a report to *Sky & Telescope* toward their annual Astronomy Day Award.)

PUT IT TO A VOTE We’re working to fill the position of club vice-president. Democracy in action...

MAKING HISTORY Our little upstart band of [geeks, nerds, upstanding citizens] has made quite the impact over the last year through well-attended special events and lots of media coverage. **Deb Wagner**, never one to sit back and watch her world go by, wants to do something about it. Deb wants to create an annual digital archive of club photos, information, newsletters, press clippings, and more. E-mail her your stuff.

NETWORKING RBAC has been featured twice on the NASA Night Sky Network web site for our public outreach activities. If you’re new to the club, this program provides materials for educational presentations. Contact **Mark Brown** for more information — any member may participate. Once new Night Sky Network materials arrive, the old ones will be added to ...the library.

NEITHER A BORROWER... Did you know that we have a club library? Well, it’s rather new, but it’s growing. We began with a set of videotapes donated by member **Ed Cunnius**. Now we have a growing list of books and multi-media resources available to check out. **Lois Butler**, who always wanted to

say, “Shhhhhhh,” is the club librarian. Lois will list all her goodies and post it on the Yahoo! site. E-mail Lois what you want and she’ll bring the item to the next meeting— she’s at tenbyfifty@starband.net.

STITCH IN TIME Preparations are underway for ordering some apparel. We plan to hire a staff of underpaid foreign garment workers to hand-stitch our insignia on clothing. Negotiations are pending.

GEORGE’S GENEROSITY Just south of Carbondale there’s a little rustic place that **George Rothemeyer’s** step-dad says we could visit sometime for dark-sky viewing. There’s running water, says George, if you’re willing to run up the hill with a bucket of water from the creek. (Carbondale humor.) Just a couple hours and you’re there. (George has a map tattooed somewhere on his body.)

SUNRISE CROSSING Planet Venus will transit the Sun on the morning of June 8th. We’re not ideally positioned to witness the event — the first of its kind since 1882 — as are folks on the other side of the world. But we can still catch a glimpse. **Tim Bucher** reminds us that the Sun will rise with the planet already in transit: you need an unobstructed eastern horizon to make the most of it. See the planet at or near the Sun’s limb at about 6:05 a.m. and watch it leave the solar disc at 6:25 a.m.

IN THE BEGINNING... there was light. But for most of us, our first affordable optics left a lot to be desired. Deb Wagner wants to donate her starter telescope to the club. Deb and I have cooked up a scheme to build it a Dobsonian mount and set it up as a kids/beginners telescope at club meetings and star parties. Want to help?

LOOKING UP **Tim Bucher’s** Coulter telescope, a bare-bones Dobsonian (no finder, screw-in focuser, fiberboard mount) offered up some great planetary views as soon as the optics were tuned up a bit. Once darkness fell, Tim lay in the grass to practice a meditative yoga pose, “The Garden Snake” — or was he merely sighting up the telescope tube due to his lack of a finderscope?



Comet NEAT, May 16, 2004.

Listening to comet NEAT

The crowd gathered amongst a myriad of telescopes to catch the first glimpse of NEAT as the sky grew dark. The weather provided an all-night hide-and-seek contest between the members, guests and spotty relentless clouds. Still, the event was fulfilling.

During many periods of tentatively waiting at my refractor for a cloud to pass, I noticed a star party is more than sights... sounds also can rule the night.

Should see it by now
Must be behind a cloud
THERE IT IS...COMET’S UP!!!
I got it...M44 too
Try this filter
Hmmm, lost it
KLUNK! Sorry, didn’t see that case
What’s that you got there?
IT’S BACK...COMET’S UP!!!
Got it, where’s that filter
THUMP! Sorry, didn’t see that chair
#\$\$@* gone again
Hey, what did I step on?
Anybody wanna see _____?
Look, another satellite...up by Leo
ENCORE! Comet’s up, again
— *Dennis Rippelmeyer*

Gary Kronk is catching the eye of international astronomers for his research on comets

COMET MAN

By ELI KINTISCH
Of the Post-Dispatch

Most comets will visit Earth only once in a human lifetime, but Gary Kronk catches them all. These days, he's focused on NEAT, a comet now visible in the southwestern sky. For more than two decades, his life has been built around a singular drive: to find every comet ever seen by man. He has scoured ancient Chinese texts for mentions of "broom star." He's flipped through ancient monks'

manuscripts for talk of "comets." Since 1984, he's corresponded with famous astronomers and historians around the world, compiling the world's most definitive history of comets into binders and filling cabinets in an upstairs study in St. Jacob, in Madison County.

Page by page, his life's opus is taking shape — four volumes of what he has titled "Cometography." Cambridge University Press published the first two volumes in 2000 and January of this year. He expects the next



DAVID CARSON / POST-DISPATCH
Despite having no formal training in astronomy, Gary Kronk of St. Jacob has received acclaim for his work with comets. He's had two books published, and two more are in the works.

two in 2005 and 2006. "I never thought it would get published," he said during a recent get-together of the River Bend Astronomy Club in St. Ja-

cob. The members of the group, of which he's president, were meeting to watch NEAT, a comet discovered in 2001. See Comets, A9



EXTRA! EXTRA! RBAC in the news

Our favorite newsmaker: club president and internationally-renowned comet researcher Gary Kronk was featured on the front page of the *St. Louis Post-Dispatch* on May 12th. Gary, who's spent his adult life studying vagabond bits of rock and ice swirling through the solar system, recently published volume two of his historic "Cometography," a catalog of every comet ever observed.

And what's even better than a story and picture in the paper? How about a caricature drawn as the famous *Post-Dispatch* Weatherbird, a front-page fixture that's ribbed celebrities, heroes, sports figures, politicians and more — "the longest continually running daily cartoon in American history," says the *Post*. This funny-looking bird must be Gary, judging by the striped socks and skinny legs.

WATERLOO HILLBILLY You know the weather must look promising when **Dennis "Rip" Rippelmeyer** drives this far north toting his Tele-Vue refractor. Rip gave up a midnight rumble in the Rural King parking lot to attend our club meeting. We appreciate the sacrifice, Rip.

R.I.P. In other news, research shows that all men named Rippelmeyer who live in Monroe County are nicknamed Rip... D.N.A. test results are pending.

ULTRA-VIEW The Breedens, Bill and Rita, appeared with their new Orion Ultra-View wide-angle binoculars — their first optics together (awwwwww). The fully multi-coated lenses work great, but it's a bit odd to see Rita looking through the left ocular with her right eye and Bill looking through the right ocular with his left eye simultaneously. Maybe together the couple sees in stereo. But wait! Why stop there? A few days later the Breedens announced the arrival of their new "baby," a Meade LX90 8-inch Schmidt-Cassegrain telescope. Says Bill, "We are so excited we can hardly

stand it! It should be great both at home (in our light-polluted back yard), and at dark sky sites. We will take the time to learn to use it, and then figure out what accessories we need. We can hardly wait for the next star party, and we are anxious to share its views with members."

Thanks, Mr. and Mrs. Breeden. We just might take you up on that offer. [↗](#)

The International Space Station traveled northerly around 9:30 p.m. at a bright magnitude 1.7.



ERIC YOUNG

June 2004



May 2004

S	M	T	W	T	F	S
25	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

July 2004

S	M	T	W	T	F	S
27	28	29	30	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

■ Holidays
 ■ Moon Phases
 ■ RBAC
 ■ Space Mission
 ■ Observing
 ■ Trivia

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	31 ■ Memorial Day	1	2 ■ New Moon 11:20 p.m. CDT	3	4 ■ C/2004 G1 (LINEAR) Perihelion	5 ■ C/2003 F1 (LINEAR) closest to Earth
6	7	8 ■ Transit of Venus	9 ■ Last-quarter 3:02 p.m. CDT	10	11 ■ Cassini: Phoebe flyby! ■ Pluto at opposition	12 ■ Mercury & Venus 1.3 degrees apart
13	14	15	16 ■ Wild 2 closest to Earth	17 ■ New Moon 3:27 p.m. CDT	18 ■ C/2003 E1 (NEAT) closest to Earth	19 ■ RBAC meeting 7:00 p.m.
20 ■ Summer Solstice	21	22	23	24	25 ■ First-quarter 2:08 p.m. CDT	26 ■ Mercury & Saturn 2.1 degrees apart
27	28 ■ C/2003 J1 (NEAT) closest to Earth	29	30	1	2	3