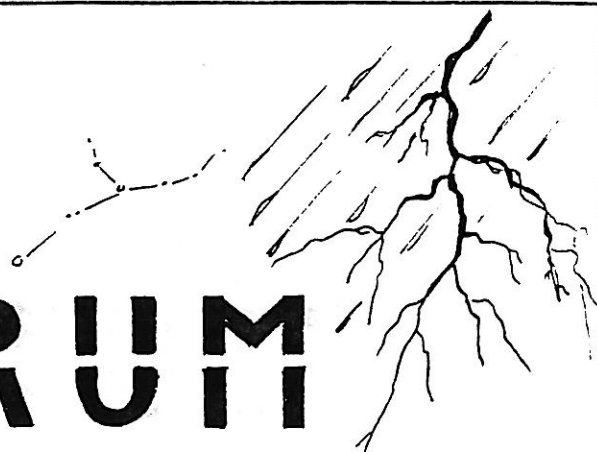


THE SPECTRUM

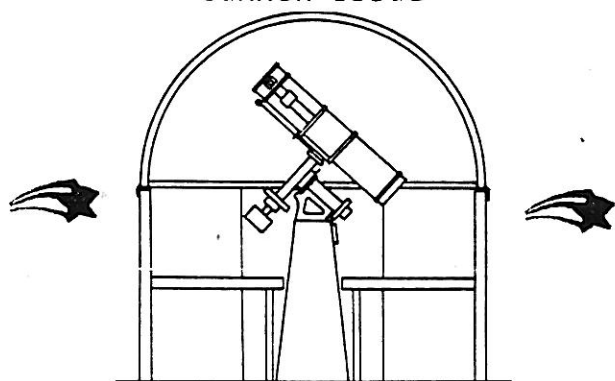


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BUFFALO ASTRONOMICAL ASSOCIATION, Inc.

JULY 1992 AUGUST

SUMMER ISSUE



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EDITORIAL

It seems that I have been asked a few times why I write about Ancient Constellations and Astronomers from the Past. The answer is simple, and in question form. Where did astronomy first come from? Certainly not books, maps or charts. The curiosity of man was when astronomy first got its start. The Ancients observed the stars way back, noticing that they moved across the sky as well as wonder among the fixed stars. If we are to know astronomy today, we first have to read those books and charts the ancients first recorded. The constellations are imaginary figures they placed in the heavens as a tribute to some king, queen, jesuit, or family member. Of course the modern astronomer has the advantage of the use of telescopes and now, electronics. SO- I give you the beginnings of astronomy by the various authors, so-to-speak.

Darwin Christy

"SPECTRUM" DEADLINE

The **DEADLINE** for the SEPTEMBER-OCTOBER issue of the "SPECTRUM" is **no later** than AUGUST 14th 1992. REMEMBER! This is your newsletter - articles are needed to keep this newsletter going! dpc

BEAVER MEADOW OBSERVATORY *457-3104*

Summer Star Parties: Our star parties are informal affairs, and are held Rain or Shine. We bring our scopes and computers to someone's house, and have fun doing astronomy. The more toys you bring, the more fun everyone has! There is always someone around to show you a new way to use your equipment. You can see if that \$200 field flattener works on your \$50 scope! They can range from a "Bring a dish" supper to late night viewing snack party, so give your host a call and see if they need anything.

June 27 Star Party: Rain or shine at home of Larry Carlino, 7118 Kinne Road, Lockport. Tel 431 3432. Time: Sunset till 1:00 AM. Larry would like to invite you to come check out his dark skies with his 22.5" scope. If you are wondering why the club is trying to purchase a bigger scope here is the chance to try one out and see for yourself what it is like to view through one. His 6" refractor gives impressive views of the Planets. Larry is very knowledgeable about all types of scopes and accessories so if you would like some help with using your equipment, bring it along!

July 4 **Public night:** Mercury will be easily visible this night in the evening sky! This will be an excellent night for viewing Comet Shoemaker-Levi, which should be well placed, and shining around 7 mag. If you did not know of the Beaver Dam breaking, and how a new set of beavers came to the rescue, you should come on out and see the new repairs. The Beaver's engineering skills have to be seen to be appreciated.

July 11 **Star Party:** Our Host Bill Halbert invites you to his parents house at 79 Wilkshire, Lancaster, from 7pm to midnight. Tel 684-3572. Bill encourages all to bring your scopes, computers, and join in on the fun.

July 18,19 **Beaver Meadow Nature Festival:** HHEELPPPP!!!! This is usually one of the busiest weekend events at the Observatory! I need computers, scopes, photographs, and lots of help. The Observatory will be open 10am to 5pm on both days. There will also be a public night on the 18th from dusk till 11pm. If the weather is clear we usually go hunting for the planets in the daytime. With any luck we should be able to find Venus, and Mercury.

July 25 **Star Party:** Bill Smith and Carol Lorenc invite you to the dark skies of Jamestown. 184 Creek Road, Jamestown Tel 1-664-0841. This is a fun place for kids so bring the whole family. Bill and Carol have 20 acres, 3 horses, 1 dog, one burro, 1 miniature goat, around 5 cats and probably another 1/2 dozen critters running around. Bill has a 10" dob, 8" dob, large binoculars, and maybe his 20" will be close to completion. Feel free to bring a tent, and or sleeping bags, so you can stay for breakfast of pancakes and waffles the next morning. Bill has made arrangements to visit a local private Observatory, which contains a 20" nonvisual computer driven scope. All viewing is done with a CCD camera! Call for a detailed map!

August 1 **Star Party/Public Night:** Irene and Roland Rupp invite you to their cottage, #316 at Lime Lake. Their phone there is 353-4636. Time 1pm till 7pm. They will supply the hot dogs, beverages, and request that you bring a dish to pass. There will be the usual boating, horseshoes, and swimming. Viewing will be done at Beaver Meadow Observatory at sunset, since this is also a Public Night weekend!

August 8 **Star Party:** Dan and Melissa Marcus invite you to 23 Riverdale Drive, Grand Island, New York. Time 7pm to 1am, Tel 773-5015. They have a 5" Comet Catcher, and a 12.5" set up for photography. The dark room will be open for developing prints, and the computer will be on line. Bring your bathing suit for an evening swim!

August 15 **Public Night at Beaver Meadow.**

Computer: We are still looking for parts. We have some, but we can always use spares in case something breaks. we are looking for:

Memory SIMMS/CHIPS
Hard drives
Floppy Drives 5.25/3.5 high or low density
Modems
Power Supplies
Video Cards
Monitors
Serial/Parallel and controller cards
Mother Boards
Programs

These can be old parts you have lying around from when you upgraded, or had one die an untimely death. These Donations are **TAX DEDUCTIBLE**. So ask around, you might be surprised at what is available.

Clean up day: My thanks to Joe Drabek, Dave Fliss, Mike Gardiner, Bob Titran, Laurie Manista, and Joe Orzechowski, who tackled the mess and won! Thanks to Luann Szucs we have new signs to replace the old faded ones!

Daniel R Marcus



MAPS TO THE SUMMER STAR PARTIES ARE ON PAGE 7

ASTRONOMICAL HAPPENINGS

JULY:-

- 2 - MOON at perigee (360,619 km)
Conjunction - Mercury & Moon
- 3 - Earth at aphelion (152,102,000 M)
- 4 - Conjunction - Jupiter & Moon
- 6 - Mercury at greatest elongation - east 26d

- 7 - FIRST QUARTER MOON
Uranus at opposition
- 9 - Neptune at opposition
- 14 - Conjunction - Saturn & Moon
Conjunction - Neptune & Moon, this will be visible as an occultation over the Pacific Ocean to Eastern North America.
- FULL (BUCK) MOON
- 17 - MOON at apogee (406,012 km)
- 19 - Mercury stationary
- 22 - LAST QUARTER MOON
- 25 - Conjunction - Mercury & Venus
Conjunction - Mars & Moon
Ceres at opposition
- 28 - Southern Delta Aquarid Meteor Shower
- 29 - NEW MOON
- 30 - MOON at perigee (357,673 km)

AUGUST:-

- 1 - Conjunction - Jupiter & Moon
- 2 - Mercury at inferior conjunction
- 4 - Pluto stationary
- 5 - FIRST QUARTER MOON
- 6 - Conjunction - Venus & Regulus
- 7 - Saturn at opposition
- 10 - Conjunction - Uranus & Moon
Conjunction - Neptune & Moon, this will be a visible occultation over Asia.
- 11 - Conjunction - Mars & Aldebaran
- 12 - Northern Delta Aquarid Meteor Shower
Perseid Meteor Shower *****
Mercury stationary
- 13 - Conjunction - Saturn & Moon
FULL (CORN) MOON
MOON at apogee (406,372 km)
- 14 - Pallas stationary
- 21 - Mercury at greatest elongation - west 18d
LAST QUARTER MOON
- 22 - Conjunction - Mars & Moon
- 23 - Conjunction - Venus & Jupiter
- 27 - Conjunction - Mercury & Moon
MOON at perigee (357,371 km)
- 28 - NEW MOON
- 29 - Conjunction - Venus & Moon

METEOR SHOWERS

CAPRICORNIDS

This shower peaks on the 23rd of July and is found near radiant 20h 16m R.A. -15° Declination. It is a stream with trajectories short lasting about 13 days. These fourth magnitude meteoros produce nearly 20 hourly and their color is white. It is believed they came from a comet of 1881 V. This shower is not to be confused with the Alpha Capricornids coming on the 30th. Observational data is needed.

ALPHA-BETA PERSEIDS

This July 27th meteor shower peaks with 50 to 10 hourly and radiates from 03h 36m R.A. +43° Declination and last approximately 11 days. It is an irregular with a trajectory of short, swift third magnitude white meteors. Much data is required to prove them to be such.

KAPPA CYGNIDS

This August 20th shower is sporadic in nature as it produces many FIRE-BALLS from radiant 19h 20m R.A. +52° Declination. They can reach a magnitude greater than -4, and as many as 5 to 10 can be seen hourly during the 11 day event. Many appear to be white but some have been seen as reddish in color. No comet seems to have been the result of these second time around FIRE-BALLS, but they are related to the Kappa Cynids of January on the opposite side of the Earth's orbit about the Sun.

OMICRON DRACONIDS

On August 22nd this insignificant shower might be located near 19h 24m R.A. +60° Declination. It only lasts 3 days and is an irregular shower showing 5 to 15 white, fourth

magnitude meteors in an hour. This shower is not related to any known comet although they are punctual annually. Much observational data is needed to prove them what they are.

INSTRUMENT NOTES

The art of bench testing telescopic mirrors seems to have declined rapidly. This is mostly due to the proliferation of high grade commercial mirrors. Now a member of the proverbial middle class can buy himself a high grade commercial telescope. He can test it himself by direct observation of celestial objects. So he feels no need for bench testing the mirror. There are not likely to be any glaring flaws. And if there was anything wrong he would not know how to make corrections.

Of course, this decline in mirror testing is really only apparently true to us as amateur mirror makers. Actually, each one of the many commercial mirrors has been tested in its own optical shop. Here are newly introduced computer read outs which greatly speed up the evaluation process. In fact the grinding and polishing stages themselves are greatly speeded up by computer control of every stage. It is only that, as amateurs, we don't have the opportunity to observe these procedures. Many are slight but important variations which are kept under wraps so that no one corporation knows all the latest developments.

These miraculus modern are far out of the reach of all but a very few amateurs. But it is interesting and gratifying to know that using only two time honored test methods we can produce a telescope mirror of excellent quality. The methods are slow and tedious by computer age stardism. But they are low in cost and are not inferior to sophisticated methods.

The first great mirror testing method was brought out by Leon Foucault of France in 1859. This method employed a pinhole artificial light source placed at the center of curvature of the concave mirror. The incident light on the mirror was reflected back as a point light image. By careful adjustment this point of light was made to enter the tester's eye. Then a sharp knife edge was positioned so that it could be moved to cut off most of the returning light. If carefully done, the surface contour of the mirror surface was revealed. This method revolutionized mirror testing and to this day is still an excellent test all by itself.

An important variation in the Foucault knife edge test was an interference test brought out by the Italian, Vasco Ronchi in 1923. In this a diffused light source passes through one part of a finely ruled glass plate with 60 to 200 lines per inch precisely ruled in its surface. The figure of 100 lines per inch makes a very good workable value. The position of the screen is adjusted so the returning image of the bar pattern is made to come through a different part of the grating. The screen is placed just inside the mirror's center of curvature so that a dozen or so lines are seen in the image just back of the screen. This method gives a quick overview of the surface figure.

I have found that an additional bit of information is produced by making the grating movable. The grating is mounted in a sliding mounting. When the pattern is seen a line at the left edge is picked out. The carriage is then moved slowly toward the right and the same line carefully observed as it passes from left to right across the whole field of view. If there is any ripple or irregularity in the line, a surface error is indicated. If the Ronchi test pronounces the mirror to be very good, a follow up by a knife edge test showing the radius of curvature at ten zones. This test is tedious but it will plot the curve of the surface and indicate whether further correction is needed.....

Ed Lindberg.

BAA ANNALS

5 YEARS AGO - Star parties were the headline news in the summer 1987 SPECTRUM. Hosts were the Rupps, Biggies, Richard Jakiel, Bill Kirst, the Marcuses, Morrisies, Dave Dunlop and Larry Carlino.

Bob Hughes, Gene Witkowski and Edith Geiger had just been elected to the board and John Yerger had been appointed Observatory Director. Darwin Christy received the second College of Fellows award for his achievements in studying micrometeorites. His work in this field had been prominently reported in Shigera Morikubo's book, Meteoric Dust. Richard Jakiel had an article on observing Saturn during its 1987 apparition. Edith Geiger wrote a mini-profile on Patty Rupp extracted from the Rochester Review, the alumni publication of the University of Rochester.

10 YEARS AGO - Star parties were held by Miro Catapovic, Jerry Morris, Steve Desmond, Tristan DiLapo, Darwin Christy and by Ernst Both at the Museum of Science. Ernst also completed his SPECTRUM article, The Sungrazing Comets. Ed Lindberg wrote an article that explains a method for aligning a telescope's polar axis by using the sun's shadow.

20 YEARS AGO - I have no copy of the July-August SPECTRUM for 1977. I suspect none was published, but if anyone has one I'd like a copy of it for the archives.

Star parties were in vogue twenty years ago. They were held by the Geigers, Stoklosas and at Octavia Black's Camp Sprucelands. Ed Lindberg reported on the second summer seminar sponsored by the Syracuse Astronomical Society held at Vestal N.Y. John Riggs was writing articles on deep sky observing for each issue of the SPECTRUM back then.

25 YEARS AGO - A special issue of the SPECTRUM announced the star parties scheduled for 1967. Unlike present day star parties, which tend to be as much social events as astronomy events, a quarter of a century ago parties were held at observatories. Five were held at our own observatory in Newstead, and two each were held at the Remick Observatory in Lockport and at Camp Sprucelands near Java.

Rowland A. Rupp

OBSERVING REPORT: THE COATHANGER by Bill Smith FAMILIARITY BREEDS CONTEMPT

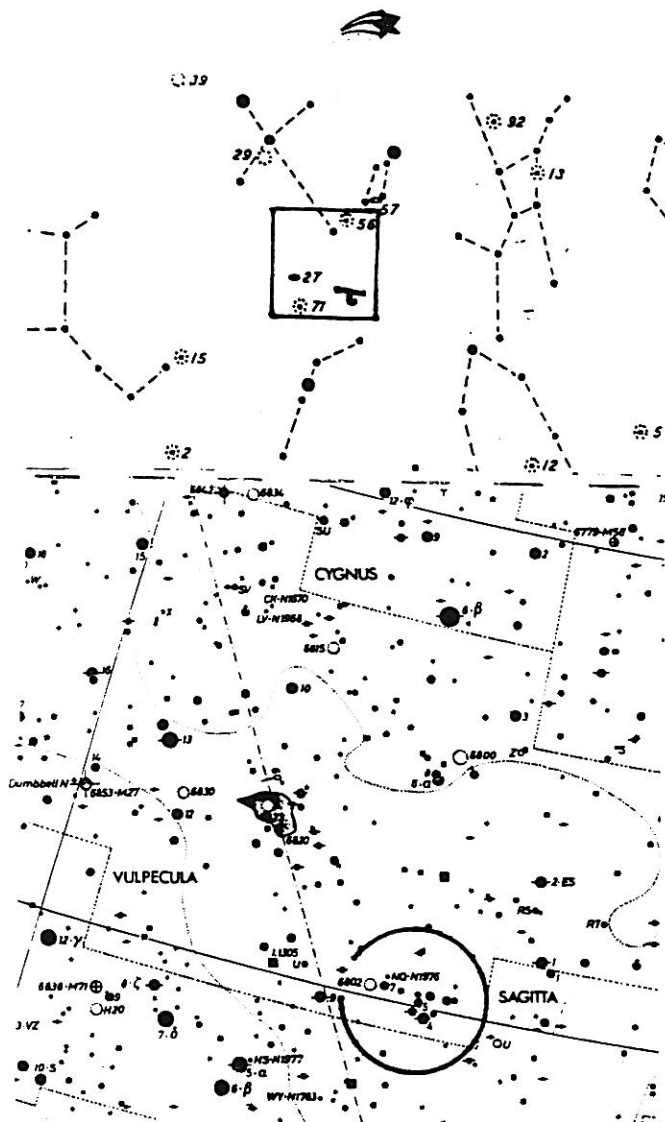
The Coathanger (RA 19h 25m +25 dec) is a well known asterism off the tail of Cygnus the swan (8 deg south of Albiero). It is a large asterism (0.5 x 2.0 degrees) best seen in binoculars although it just fits in my 8" f/4 at low power.

I've known it for years but never really scanned it with a scope although I have seen it several times (or parts of it) with scopes to 10 inches. There is an open cluster, NGC 6802 at one end of the hanger. I have never noticed it before. The only reason I know of it is I was looking for new NGC objects near M27 and M71. Looking at Sky Atlas 2000 I noticed an open cluster by the Coathanger!

This just goes to show that familiarity of an object brings a visual contempt for that object in that upon repeated but uncritical viewing one sees the whole of an object but none of the detail. Just try drawing your kitchen clock, getting in all the details like the shape of the numbers, rounded or squared edges etc.

NGC 6802 is a really nice cluster! In an 8-inch it gives me the impression of what most objects must have looked like to Messier: soft, fuzzy and gaseous. This cluster is comprised of about 50 stars mag 13-18, most fainter than an 8 can resolve, with a dozen or so that twinkle at mag 13-14 in this "cloud". It is compact at 4 minutes of arc and should be quite a grand sight in a larger instrument. I think it is much nicer than the other open clusters within 10 degrees of it (such as the disappointing NGC 6800, 6830 and H20) and this one is a snap to find -- just look for the Coathanger!

Additionally there are two double stars in the Coathanger with Struve 2521 between 4 and 5 Vulpecula having nice color contrasts and wide separations. While looking at these objects don't forget to look at the Coathanger itself - it's a real sparkler.



ANCIENT CONSTELLATION

ANTINOUS

In dreams it seemed to me I say suspended
An eagle in the sky, with plumes of gold,
With wings wide open, and intent to stoop,
And this, it seemed to me, was where had been
By Ganymede his kith and kin abandoned,
When to the high consistory he was rapt.

translated from
Translated from Longfellow's



Antinous

From Longfellow's translation of
Dante's "Purgatorio"

ANTINOUS lies in the Milky Way directly south of Altair, the first magnitude star in Aquila.

This constellation dates back as far as 132 A.D. when it was introduced into the sky by the Emperor Hadrian. He placed it there in honor of his young Bithynian favorite, whose soul his courtiers had shown him shining in its 'lucida' after the youth's self-sacrifice, drowning in the River Nile from his belief that his master might sustain a longer life. Because of the oracle at Beza, it was asserted that only by the death of the object the emperor most loved could have been averts of great dangers.

This new asterism was little known among the early astronomers, yet Ptolemy alluded to it, recognizing the stars as those of Aquila. In its disappearance in early times, or as it was seemingly unnoticed, Mercator rediscovered it and put it on his celestial globe in 1551 with six components. Even Bayer followed by placing it on his map as a part of Aquila, although not mentioning any particular stars in which it was comprised of.

Tycho also utilized it; but it first appeared separately in print on Kepler's 'Stella Nova' of 1606. Also in his 'Rudolpinae Tables'. In 1640, it appeared in 'Astronomica Danica', authored by Christian Longberg of Denmark - Pen-named - Longomontanus (an astronomer from the past which appeared in a previous "Spectrum"). It is also found in the 'Prodromus' by Hevelius who also added to it a Bow and Arrow, the ancient Sagitta.

Flamsteed mentioned it in his 'Historia Coelestis'; and Jesuit Abbe Maximillium Hell described it extensively in his 'Ephemerides Astronomica' of 1769 and 1770; later Bode also had it published in his catalogue, giving it great mention; BUT-- Argelander omitted it from his 'Uranometria Nova' of 1843, only showing it as that of the Eagle, Aquila.

Baye substituted GANYMEDE for Antinous, while others have used both names indiscriminately; Tennyson described the youth as -

Flush'd Ganymede, his rosy thigh
Half buried in the Eagle's down.

This ancient constellation can still be found on many maps and charts, although not recognized by the astronomers of today.

Darwin Christy

OBITUARY

Leonard Milks

With the passing of Leonard Milks on last April 12th the BAA lost a most friendly member and loyal worker.

Len was born in the Little Valley area and spent most of his life in the Western New York region. He worked for various area firms always as an independent contractor. He was a self taught machinist of high skill. Through long application he became an expert welder.

Len gave freely of his expertise in helping us on several projects. We will miss his friendly manner and the light hearted way he made simple solutions to knotty problems.

Len enjoyed following the exploits of the space scientists and astronauts. He derived much pleasure from observing the planets through his high grade 10-inch Meade telescope.

Len is survived by his wife, two sons and a daughter. To them we extend our deeply felt condolences.

el

CARROLL C. GEIGER

It is with great sadness that the Buffalo Astronomical Association notes the death of Carroll C. Geiger on May 19, 1992. Carroll died unexpectedly of a heart attack while working around his property on a beautiful spring day.

Members of the BAA knew Carroll well, as he and Edith attended most functions of the organization over many years. Carroll was a faithful behind-the-scenes member, who could be counted on to lend a hand whenever needed. He always had a friendly word for everyone, children as well as adults, and he was a delight to talk to. A very accomplished person himself, he was content to let Edith be the office-holder and primary astronomer of the family.

Carroll retired in 1976 from the Buffalo school system, where he served as Director of the Music Department for nineteen years after teaching band and orchestra for almost a quarter-century. A graduate of the University of Rochester's Eastman School of Music, where he also earned a master's degree, Carroll was involved in a myriad of musical activities for more than fifty years. In addition to conducting several Western New York groups, he performed professionally on the clarinet, bass clarinet and saxophone.

The BAA has lost a staunch supporter and good friend. Carroll will be sorely missed, but happily remembered. Deepest sympathy goes to Edith, his wife of fifty-six years, their four children and their families.

We wish to thank the BAA for its sympathy and kindness at the time of Carroll's death. It was deeply appreciated and will always be remembered.

Edith Geiger and Family

Astronomer from the Past

Jean Baptiste Joseph Delambre was a French Astronomer born in Amiens, France on September 19, 1749. Little known today, he did in his time contribute much in the planetary portion of the universe. On August 19, 1882 he passed away in Paris.

Eight years after the discovery of Uranus, in 1790, Delambre published the tables of that planet, even though in that period of time it had performed but a small part in its eighty years orbit about the sun. He also constructed

tables of Jupiter and Saturn, as well as the Jovian satellites, which, with several treatises, procured him a reception into the National Institute.

In 1792 he was appointed to measure the arc of the meridian between Dunkirk and Barcelona for the French Government. With his associate, Mechain, he completed this work in 1799. Napoleon appointed him Inspector-General des Etudes in 1802, which post he resigned when chosen perpetual secretary of the class of mathematical sciences in 1803.

Delambre's first tables of the sun were published in 1792 and his newer ones appeared in 1806. He succeeded Lalande in the College de France in 1807 and wrote his 'Traite d'astronomie Theorique et Pratique' in 1814; 'Histoire de l'astronomie du Moyen Age' in 1819; 'Histoire de l'astronomie du 18e Siecle' just before his death.

Darwin Christy



BACKYARD ASTRONOMY: STAR-HOPS

Sky and Telescope magazine has a series called Backyard Astronomy that covers practical topics for amateurs. One such topic is their star-hops. These are guided tours through a small section of sky, usually a wiggly strip 15 to 25 degrees in length.

The tours involve all types of objects: stars, double stars, colored stars, variables, open and globular clusters, planetary and gaseous nebula and galaxies. Whatever one would bump into by making a line on a map is discussed. If it's up there it's in these articles.

They start at a bright star and use star patterns to go (hop!) to nearby objects and hop again on to the next. Often telescope fields of interest merge with the previous and almost always finder fields touch. This way you spend more time viewing and less time moving the scope all over the sky.

Three I tried in March are:

- Spring galaxy star-hop, S&T, April 1991
- A star-hop in Monoceros, S&T, March 1992
- A star-hop in Auriga, S&T, December 1990

The S&T author, Alan McRobert, used a 6" f/8 scope in pretty good suburban skies. I used a 10" f/5.6 at 44-210 power in semi-rural skies. He spent some time on these objects as his visual descriptions show study at the eyepiece. What may seem featureless in a ten second view (once found!) will reveal hints of structure on sustained study.

There are good observing hints in the articles. He tries to get the reader to experiment with different powers on objects; and his descriptions of the objects do inspire one to concentrate and look more keenly. There is usually some historical and scientific background on each object which makes observing a more fun and learning experience.

HIGHLY RECOMMENDED

These articles read well enough to put one in the viewer's seat even if you don't view. For those that do view they save a lot of time as they are a prepared and researched tour. As in most things that are worthwhile, planning is important. These tours can be set up ahead of time, on a cloudy night, by using a star map and reference books (like Burnham's) to select a variety of objects in a small area of sky. While a tour can be done without planning, imagine doing one of these star-hops on the fly. I'd guess interesting doubles and colored stars would be missed and objects too faint to see will not only frustrate you but put you on a different course as they are on the map but you don't see them in the scope!

THE HOPS IN BRIEF

The Spring galaxy star-hop looks at a circular trip off the tail of Ursa Major (Alkaid) catching M51, M63, the double star Cor Caroli, M94, Y Canum Venaticorum (a wonderful orange-red star) and M106 as highlights. Alan saw 11 galaxies in his 6". The 10" picked up all the ones shown on Sky Atlas 2000 plus a few other galaxies not plotted but confirmed when I checked with the more complete Uranometria. I don't think I would have seen the unmarked galaxies had I not been

prowling slowly and deliberately. The colliding galaxy duo of NGC4485 and 4490 are easy to locate, a delight to see, hold magnification well and start the mind turning on how, why and what will the outcome be of these smashing galaxies.

The Star-hop in Monoceros is in an area east of Orion where I really haven't done much viewing at all. The Christmas tree cluster, a charming one, as noted by Tom Nigrelli in the December meeting and the Rosette nebula are the only objects I usually look at over there ... until a guided tour appeared. Here open star clusters abound like galaxies did in the previous star-hop. Dark nebulae show their presence by areas of blank sky in an otherwise background of dim stars. Alan described 10 clusters in this compact star-hop: the best for me were NGC2251 a nice splash of stars in a shape like water thrown out of bucket and 2236 a shower of faint stars that come out of hiding as you look longer at the cluster. Ambrosial was NGC2261, Hubble's variable nebula, a perfect little comet shape with a wide tail. It should be seen even in a 4" in suburban skies: it is compact, bright and has edge details to see. Two triple (yes 3) stars not to miss are South 529 and Struve 939 - the best triples I've seen. Don't miss Monoceros like I did for so long. Make it a point to search a neglected area of the sky one in a while.

A Star-hop in Auriga focussed on the open clusters and gas nebulae starting from Capella through the heart of Auriga. There are a lot of interesting objects here besides the 3 big Messier clusters. One has to slow down and stroll. Auriga has objects for instruments of all sizes. Alan described 23 objects on this tour including 3 triple stars. My favorites were the easy and bright double star Struve 698 (nice colors), the Leaping minnow asterism (group of bright stars 1.5 degree long, perfect for binoculars), NGC 1931 a small but bright reflection/emission nebula that should be seen in suburban skies and M37 which I think is the choice Messier cluster. M37 is bright, very rich and has nice patterns within it. Not seen were the Index Catalog object IC417 nor the tiny planetary nebula on the edge of M38. Also the showy sounding "Flaming Star Nebula" is so only in photographs; the 10" shows a hazy, vague glow, although bright for an IC nebula!

Viewing new objects is not only fun but does give me the kick I need to go back into old issues of S&T and read up on a particular type of object.

MAGNIFICATION AND OBSERVING HINTS

Magnification is a funny thing. Small galaxies within 2 mags of your scope limit do not usually take magnification well but some do. Perhaps they have a more defined edge or dark, dusty regions. Brighter ones do magnify and structural details as spiral arms, bright knots, nuclear condensation, contour shape and edge delineation often accept study at higher powers. It is best to experiment. If you know of photographs of an object, study them after you view the object lest the photographic detail make your eye lazy and 'imagine' details near the limit of vision.

Star color can be enhanced by locating the star first, putting a cardboard with a 2" off-center hole over the tube and changing to an eyepiece yielding 60-200 power. The 2" hole should not be obstructed by the diagonal or its spider. Sixty to 200X at this small aperture makes the airy disk (the optical image of a point source) an easily visible, steady and smoothly colored disk.

The urge to view more common objects is too easy when observing time short and clear nights few. Spend some of that cloudy time planning your own star-hops. There are a lot of overlooked but deserving objects out there for viewing - let's hop to it.

Bill Smith

SPY and TELL

Bruce Newman, Joel Stuckey, and Ed Czapla observed a 15th magnitude galaxy during a viewing session at Beaver Meadow.

Bill Halbert had the lead in "Sir John in Love" by Ralph Vaughan Williams, which was presented by the University of Buffalo Opera Workshop on May 1st and 2nd.

Wade Sigurdson attended a meeting in Vermont in mid-June. Lynn followed a week later, and they enjoyed a delightful vacation.

Ken Biggie has been working with his brother-in-law doing landscaping, patios, and walkways. He's happy with his new job. Son, Kevin, is in summer school at U.B. taking a class in political science. In July he goes to Officer Candidate School for six weeks in Quantico, Virginia. Chris finished his first year at Carnegie-Mellon University, where Kevin will be a senior next year. This summer, Chris is working at Four Seasons and Doughnuts and Cream, both of Orchard Park.

Dave and Cathy Sepulveda, and the children, vacationed in Sandwich, Cape Cod, for a week in June with Cathy's Mom, and enjoyed just relaxing. They visited the State Fish Hatcher at Adam's request, and went to the Thornton W. Burgess Museum and the Green Briar Sanctuary.

Dave Fliess has worked at the Kellogg Observatory on Friday nights throughout the season until the closing night on May 29th. He has been vacationing around the area including a jaunt to Beaver Meadow to observe with Bill Halbert and a new member, for two nights, June 8 and 9, until 3:00 a.m.

Congratulations to Melissa Marcus who was elected section chairman of District 8 Federated Garden Clubs of New York State. She is in the middle of her two year term acting as liaison between seven clubs and the district. She attended a flower show at Sonnenberg Gardens, and a state environmental conference in Canandaigua in mid-June.

Ken and Cheryl Kimble have purchased a new home in Tonawanda. Ken promised he'll work 60 hours a week for the rest of his life to finish the payments. Good luck!

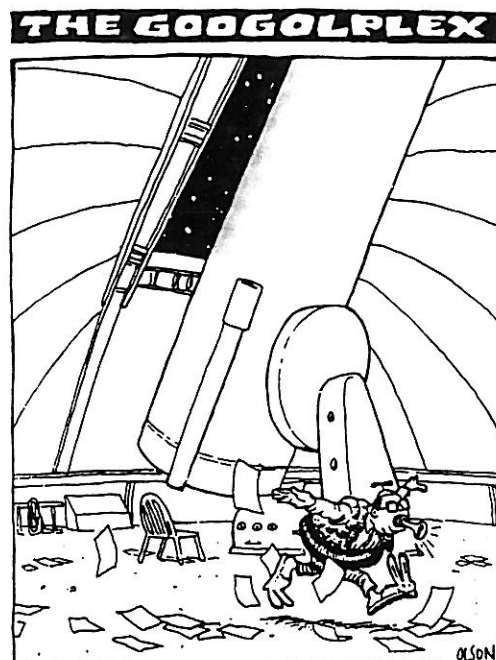
Edith L. Geiger

The following cartoon is from
"ASTRONOMY NETWORK NEWS"

Take heed to the need for a
"CLUB CARTOONIST"

Cosmic Corner

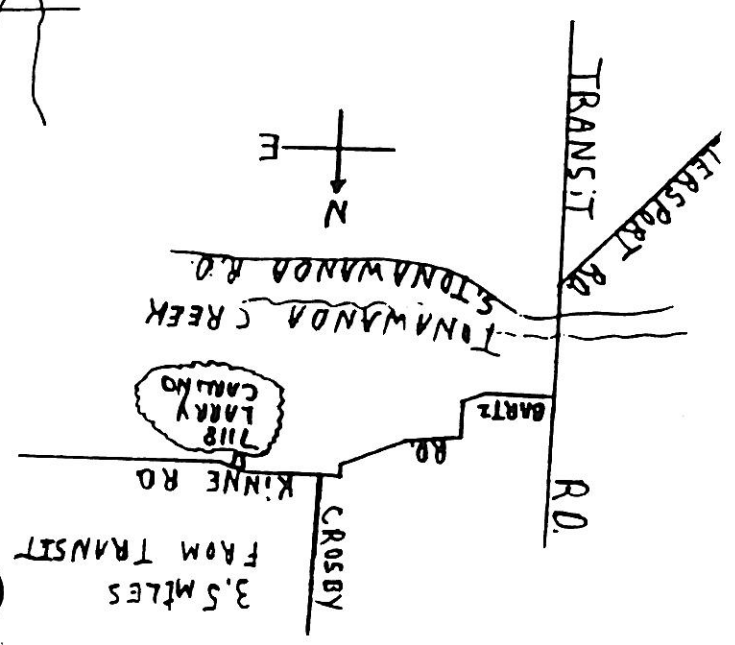
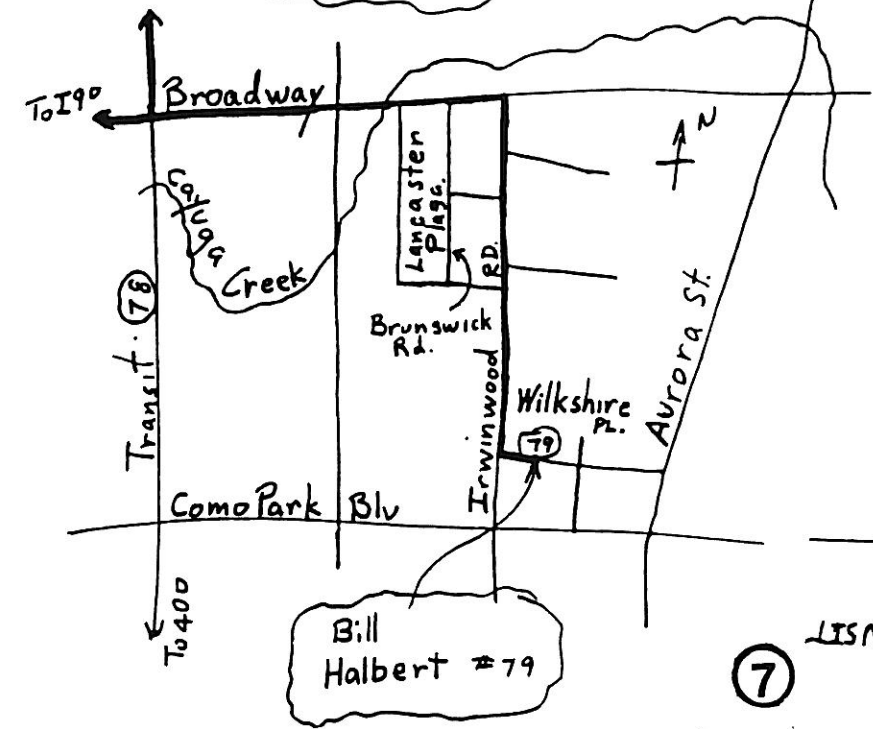
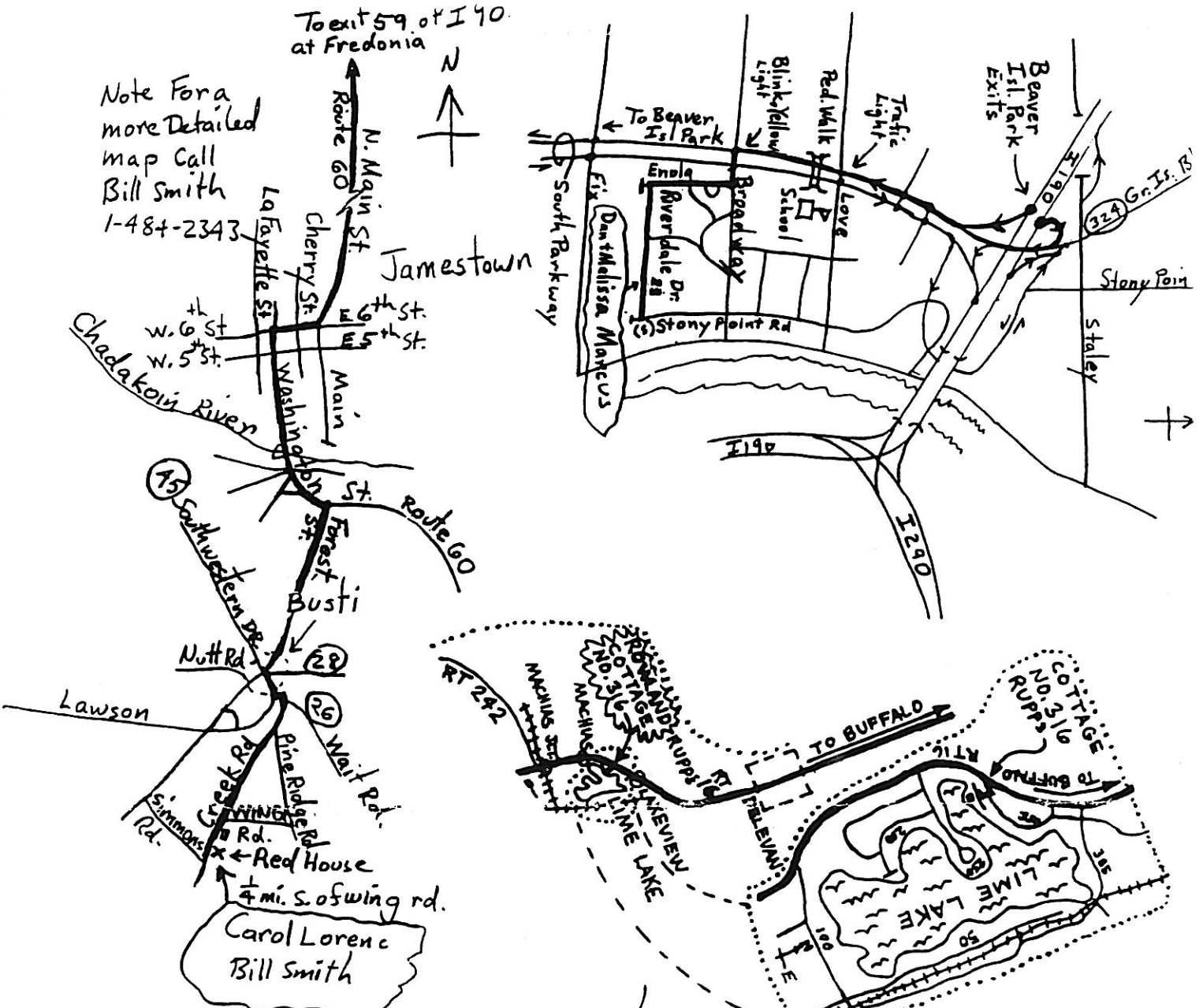
This issue's comic is from Canadian cartoonist Geoff Olson. If your club has a cartoonist, please send some comics!



ALL IN ALL, JENKINS HAD NOT ADAPTED WELL TO THE LONG HOURS ALONE AT MOUNT PALOMAR.

Note For a
more Detailed
map Call
Bill Smith
1-484-2343

To exit 59 of I 90
at Fredonia



MEMBERSHIP CORNER

Membership dues are due for the 1992-1993 year. They are payable to the BAA and can be given to Bruce Newman at any regular meeting, star party, or they may be mailed to him at **67 Heather Hill Dr., West Seneca, NY 14224**. Dues are listed as follows:- Family membership - \$20.00

Individual or Regular membership - \$15.00

Student or Senior membership - \$10.00

Subscription only - \$5.00

Bruce Newman



"ASTRONOMICAL MISFITS"

The following group of names contain one name which is **not** really a part of the other names. Can you pick out the name of the Misfit? Now tell why it does not belong to the others.

- 1) Sun Vesta Antares Mars Pluto
- 2) M-81 M-82 M-42 M-66 M-33
- 3) Io Ganymede Ceres Europa Callisto
- 4) Cancer Leo Libra Sagitta Pisces
- 5) Cassiopeia Cepheus Orion Ursa Major
Ursa Minor

The answers will appear in the issues of the
"SPECTRUM"

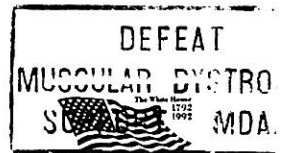


* THE SPECTRUM *

BUFFALO ASTRONOMICAL ASSOCIATION, INC.



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