ASTRONOMY DAY 2020
By Mary Ducca

Astronomy Day is coming! Did you know that Astronomy Day was created in 1973 by Doug Berger, then president of the Astronomical Association of Northern California? By providing easy access to astronomical instruments such as telescopes, this unofficial holiday aims to raise interest in astronomy. It also gives the general public a chance to interact with astronomers and space scientists.

This world-wide event is held each spring and fall, timed with the occurrence of a quarter moon. On the selected date, museums, observatories, universities, and astronomy clubs set up telescopes in public spaces such as schools, parks, and shopping malls to allow people to observe the skies during the day and night. The event may also include lectures, conferences, educational outreach, exhibitions, and essay competitions.

This year's AAI Astronomy Day is Saturday, May 2, 2020. Plans are already underway. Our theme is “Amazing Anniversaries” which is celebrating both the 90th anniversary of the discovery of Pluto and the 30th anniversary of the launch of the Hubble Space Telescope. Pluto was discovered by the American Astronomer, Clyde Tombaugh, on February 18, 1930. The Hubble Space Telescope was launched into orbit aboard the Space Shuttle Discovery on April 24, 1990.

We will be holding the event at Trailside Nature & Science Center in the afternoon from 1:00 - 4:00 pm and then in the evening at Sperry Observatory from 7:30 - 10:30 pm. We will have many of our usual activities as well as some new activities: safe solar observing, solar system walk, children's activities, meteorites presentation, presentations on Hubble and Pluto, and observing through AAI's two telescopes. In addition, we will have door prizes at Sperry Observatory in the evening. That is always a big hit. If an-
The Asterism, the newsletter of Amateur Astronomers, Inc.

February 2020

Everyone would like to donate an astronomy-related prize for a door prize and/or volunteer please contact info@asterism.org.

We are requesting volunteers to help at Trailside and QOs to help operate the telescopes at the Observatory. Our next planning meeting will be Sunday, March 15 at 1:00 pm in the Sperry Observatory classroom. All are welcome to attend the planning meeting. We will have monthly meetings until the event so if you are unable to attend in March, you will be able to attend a future meeting.

We have had very successful Astronomy Days over the past years with a lot of the public attending and enjoying the activities. This is our opportunity to help educate both children and adults about astronomy in a fun and entertaining atmosphere. Also, this is a great way to meet up with other AAI members. So join us!

Trailside Nature & Science Center is located at 452 New Providence Road, Mountainside, NJ 07092.

☆☆☆
☆

FRIDAY NIGHT YOUTH AND SMALL GROUP PROGRAM
By Mike Gironda

The 2019-2020 Friday Night Youth and Small Group Program is in full swing, starting with our first visiting group on October 11. Our guests, Brownie Troop 40079 – Cranford, were given a Power-Point/hands-on program dealing with the "Many Faces of the Moon". After this 30-minute classroom activity, the scouts and their parents toured Sperry’s two domes. Here, they learned about the operation of our two telescopes and despite the mostly cloudy sky, viewed the 13-day waxing Gibbous Moon.

During the 2018-2019 Business Year, we provided similar programs to 15 youth groups. Those groups included 256 youths and 130 adult chaperones. So far this year, we have 7 groups scheduled and 6 groups with paperwork pending. The Program is a robust, educational service that AAI provides to local communities in and around Union County.

We are always looking for volunteers from the membership to aid those who are already active in the Program. Additional presenters, co-presenters, event aides, escorts, and of course QOs are needed for the continued success of this endeavor. We have many resources, including pre-made Power-Point and hands-on programs, that are available for use by new presenters. We are open to new and innovative presentation strategies that will enhance our overall product.

If you would to learn more about the Friday Night Youth and Group Program, please contact me, Mike Gironda (mikegir@aol.com), for further information. If you would like to observe one of the events for a visiting group, you are welcomed to attend. Contact me for dates of future visitations. Hope to see many new volunteers soon!

☆
☆☆☆
The Asterism, the newsletter of Amateur Astronomers, Inc. February 2020
THE BIRDS ON THE CEILING: AN OBSERVATION

By Alan P. Witzgall

Some time ago, I read an excellent article about a discovery made in a cavern in France. Now most of us are familiar with the famous cave paintings that Neolithic peoples left us, especially those of Lascaux. This is where a diagram of when and how to hunt bison was recently linked to the night sky of (then) springtime migrations. When the Sun reached the Vernal Equinox, the cave paintings are fully illuminated. This happens only on that one day in the year, so it’s a clear message. Also, the familiar constellations of Taurus, the star cluster M45 (the Pleiades), and the bright stars of the Summer Triangle have all been found on these huge panoramas. In Lascaux, the sunlight lights up the crossed tales of the bulls, and this was the time to set out to hunt and bag these giant animals.

Since then, even diagrams of fishing for salmon have been found, with the time of year for the run of the fish being indicated by the rising Sun lighting up a bas-relief of the piscine quarry on the wall! Darn clever, those Cro-Magnon! The cave that I wish to discuss, however, is in southern France, near Rouffignac, and is commonly called the Cave of a Hundred Mammoths. It appears that prehistoric preschoolers, aged between three and seven years, were encouraged to create artwork of their own.
What caught my eye, however, was the article’s noting that there is a part of the cave where we do indeed have evidence of the children drawing on the ceiling as well as the walls. We can identify at least four children, and one in particular, apparently was a five year old girl who was quite creative. It appears that a caring adult had held her (and others as well) up to the ceiling to paint what she liked – birds! There was no way she could have done this alone, as the ceiling is six feet high. There is no evidence for scaffolding. It appears that only she added bird art to the ceiling’s menagerie. The structure of the finger marks in the fluted surface indicates the children’s ages, as well as evidence of a fingerprint in the soft surface of the pigment. The article extols that this is what made us human, that it is our sense of interaction and even play with our children that helps make the next generation ever more advanced. Then as now, human children have the longest childhood of any species on the planet. It’s the price of adult increased intellect and adaptation.

I mention this because of what I am seeing as a welcome trend at AAI. We have a number of young people whose parents care enough to bring them to Sperry Observatory and to encourage them to participate in our programs. Right now we have a good number of Associate Observers (those Observers trained in the use of the 24-inch reflector telescope, but who are under the age of 18), more than at any time in the last decade and beyond. As Instrument Qualifications Committee chair, I have made a point of getting members involved with the yearly training on the telescopes at Sperry and of late this includes these young ‘kids’. It is encouraging to see. After all, they are the future of AAI.

Therefore, this is a call to all AAI members to help and encourage these new young people in our midst. I don’t like using the term “mentor” because it implies a teacher-student interaction (and children want to get away from school on occasion!). But there is no other description that applies. We have a number of public outreach programs in place, with the Displays & Presentation Committee always looking for new speakers for the Fridays@Sperry program, and for Astronomy Day celebrations (this year, May 2nd is the date!) for young peoples’ activities. Each of us so-called ‘adults’ does have a responsibility to hold these new guys on the block up to the ‘ceiling’, in whatever subject they are interested in studying, so they can place their paintings of ‘birds flying high’ up there on the vault of knowledge.

SERVING TIME
By Bonnie B. Witzgall

Located in Upper Montclair, NJ is the Presby Memorial Iris Gardens. Listed on the State and National Register of Historic Places, this garden has been a haven for artists, photographers and lovers of irises for more than 75 years. The Citizens Committee of the Iris Gardens, Garden Club of Montclair, and countless volunteers all aid in the planting and preservation of the countless iris species maintained here. Between late April and early June, Mountainside Park is awash in rainbow colors with new iris hybrids introduced each year.

Al and I visit these gardens every year in May, camera in hand. We come away with photos and a sense of renewal for the impending late Spring. We marvel at all the fantastic color combinations and shapes produced by the breeders and take pleasure in the creations of Nature. This year’s trek, how-
ever, was different. The Irises were beautiful, but then we saw something appalling and sad. (You would think that after 75 years of effort, some of the learned people who manage the Garden would be more attuned to the Natural World!)

Adjacent to the Iris Gardens is the Victorian Walther House, headquarters for the Town’s Citizens’ Committee. All around this stately house are formal gardens displaying different wildflowers, ferns, blossoming trees, flowing shrubs, and countless plants. In the center of the formal garden is a 4½ foot high concrete pedestal, which upholds a brass sundial. The gnomon (the part of a sundial that casts a shadow) sits on a metal plate surrounded by the hours engraved in Roman numerals. The plate is bolted onto the pedestal and is located in the center of the garden’s crosswalk.

Having any sort of sundial, fanciful or precise, is nice to discover in a garden setting. It quietly invokes quantum mechanics, Galileo’s righteousness, and astronomical art without being forceful or openly controversial. However, I’m sure very few visitors to the Gardens ever perceive it that way.

Being devoted astronomers, we always closely admired the sundial. We whimsically compared our digital watches, reluctantly set to Eastern Daylight Saving Time to the dial’s metal face. Well, you can’t imaging our surprise and shock! The foul audacity of some ignorant people! Upon close inspection, Al & I discovered that someone had corrupted the sundial! The brass plate had been unbolted and reattached to the pedestal, misaligned about 15°. It was now unnaturally set to correspond with Eastern Daylight Saving Time! Blasphemy! A slap at Galileo! That beautiful sundial face had been hijacked! That ‘in your face’ proof of our sun-centered system, that benign relationship with astronomy had been callously forced to obey New Jersey’s acceptance of Springing the clocks ahead one hour! We were shocked! In previous years, our visits to the sundial had been pleasant. We were happy to see local solar mean time properly measured by the orbs and then acknowledged by the local gardeners. Now for the moment, we had to admit the ill-bred masses won!

The Country’s Daylight Robbing Time finally ends in early November. Al & I plan to revisit the Victorian Walther House. We must see if the garden’s sundial was returned to its proper position. If it has, Galileo and we can rest easy. If not, we always carry various screwdrivers and brass screws in our van… just for ATM purposes and to avenge cosmological injustices. Note: This article was originally written in 2004.

As a historical note, a large sundial (15 ft in diameter, with 5 ft tall gnomon) was once adjacent to Sperry Observatory. A gift to Union County College in 1972, it had fallen into disrepair and was demolished in 2019. Photo credit: North American Sundial Society http://sundials.org/index.php/component/sundials/oneDial/797
Congratulations to AAI member Dennis Conti for receiving the 2020 Chambliss Amateur Achievement Award! The Chambliss Amateur Achievement Award is for an achievement in astronomical research made by an amateur astronomer who is a resident of North America. The American Astronomical Society (AAS) conferred this award to Dennis earlier this year for “his outstanding observational, computational, and educational contributions to exoplanet studies”. A former head of AAVSO’s Exoplanet Division, Dennis has literally written the book on amateur exoplanet hunting and has been active in both the KELT and TESS follow up groups. His well-written guides on gathering the most photometrically precise data and processing that data into useful light curves can be found on his website www.astrodennis.com, along with excellent PowerPoint presentations of the many talks he has given on the subject.

Dennis contacted AAI in 2016 about increasing Sperry Observatory’s value to UCC. He came to Sperry from Maryland and trained a dozen AAI members in exoplanet observations, and together we gathered our first light curve that evening. From Dennis’ training, some of the members went on to do observations for the Kilodegree Extremely Little Telescope (KELT) exoplanet survey and were published in the KELT False Positives Catalog in recognition of data submitted. AAI is proud of Dennis’ work in exoplanet studies and even more appreciative of his willingness and enthusiasm to bring AAI into this field. You can read more about Dennis in an article posted by Sky & Telescope in this link:


☆☆☆

The Asterism, the newsletter of Amateur Astronomers, Inc. February 2020
ASTRONOMY LEGEND ED BYERS PASSES AT 92

A tribute by his longtime friend Chuck Mitchell

It was with great sorrow and loss that we awoke the day after Christmas to learn that one of our astronomy pioneers and a great innovator, not to mention a great man, had passed away. Edward R. Byers passed away peacefully in his sleep on the morning of 26 Dec 2019. His passing was unexpected.

Ed was a tremendously gifted machinist, designer, and innovator. His precision gears and telescope mountings are the things of which legends are made. In addition, he was as fine a human being as ever there was.

I first met Ed, without knowing who he was, at a Riverside Telescope Makers Conference (RTMC) in the mid 1970s. He was very unassuming as he explained to me the design beauty of a 4.5" Brashear crescent mount I was exhibiting and how it had influenced his mount design. As he walked away he said, "Oh, by the way, I'm Ed Byers". That meeting started what would become a 45 year friendship that saw him become a friend, a mentor, and a role model.

Ed loved what he did. In fact, it was not uncommon for him to walk the 25 feet or so from his house over to his shop every day. Every day. How many of us are lucky enough to do that willingly for almost 70 years...

We should not mourn Ed but rather rejoice that he lived a good life, although it was not without its rough spots. In fact, I think it is fair to say that Ed was one of the happiest men on the planet when he left us. Ed is survived by two daughters and several wonderful grandchildren, and a new wife. You see, Ed was married Nov 27, 2019, to a wonderful woman who could best be described as the love of his life. Ed left his hometown in Missouri to go defend his country in WWII. He joined the Navy and in doing so changed the course of his life. He learned to be a machinist, thank goodness, and served aboard ship in the North Atlantic. When he returned home, he went to work for the Santa Fe RR and might have stayed there had it not been for a train accident in 1951. He had become an engineer by then and unfortunately his train was rear-ended by another train in a switching yard and Ed was injured such that the RR retired him. As Ed looked for something new to do, he tinkered with his telescope mount. He realized that good drive gears were not commercially available to astronomers in 1951 so he made his own. And so it began...

Over his lifetime Ed designed and fabricated equipment for the amateur market and for government agencies. In fact, Ed would occasionally take government contracts that would see him stop providing anything to the amateur market for years at a time. He made classified equipment for government, gears that flew aboard balloons to the upper reaches of the atmosphere, as well as the products we most often associate him with.

When he joined the Navy, he left behind his high school sweet heart. As fate would have it, he would not see her again for 75 years! He came home after the war only to find her married. Ed moved out west. Ed’s first two wives passed away and he was left a widower. Seventy-two years after she wed her first husband, he passed away. She reached out to Ed after that and the magic was instantly re-
kindled. I never, in all the 40 years I knew Ed, saw him so very happy. He was like a kid again...a 92 year old kid. It went so well that they were married over Thanksgiving and she moved in with Ed in Barstow two days later. It was a great time to Ed. The man was positively giddy with joy. It was a great month for Ed and a fitting end to a life well-lived. While he will be missed, it is with great comfort to all that knew him that he went peacefully in his sleep and as happy as a man could be...

The author and Ed with three recently finished Series IV mounts

Interested in Serving on an AAI Committee?

AAI’s Committees can be found on our website at www.asterism.org. The Club is organized into a number of interest and service committees, supporting all areas of astronomy and public relations. We are always looking for volunteers. On the Home Page click on About and scroll down to Committees. Click on a committee or activity name to see a description of its functions and its chair or principal member. If you would like to help, contact the listed member. In most cases, you can simply click on his or her name to email them. This is a great way to meet members of AAI and make new friends!
The Keck telescopes have gone on an archaeological road trip to the most remote neighborhoods of our galaxy. These neighborhoods are peppered with mini-galaxies-within-a-Galaxy that are quite sparsely populated with just a few handful of stars. Dr. Kirby uses stellar spectroscopy to infer the kinds of stars that existed long ago and how quickly those stars were forming and dying. He is involved in designing the Galactic Archaeology survey for the Prime Focus Spectrograph on the Subaru telescope.
Editor’s note: Stewart Meyer’s final submission for his long-running Skybox column celebrated the 50th anniversary of Apollo 11 landing on the Moon. Many AAI members will miss his wit, expert knowledge, and desire to inform others on numerous matters related to astronomy. Clif Ashcraft has prepared this obituary below for readers of The Asterism.

IN MEMORY OF STEWART MEYERS

By Clif Ashcraft

STEWART MEYERS passed away on Tuesday, August 27, 2019, at Robert Wood Johnson University Hospital, New Brunswick. He was only 56 years old. Stewart was born in New Brunswick and resided in East Brunswick his whole life. Stewart worked in data entry throughout his life, and was most recently associated with Just Collect in Franklin.

Stewart joined AAI in 1994, took the QO courses and became an active Qualified and Senior Observer. He almost never missed a duty night until he became ill and was unable to come to Sperry. He was a frequent contributor to The Asterism with his regular column, Stewart’s Skybox. His last article appeared in the July 2019 issue. Stewart's knowledge of astronomy was quite broad and he was happy to share it when the occasion offered itself, either in the form of penetrating questions of our professional astronomer lecturers at monthly meetings or in answer to questions from our guests in the observatory domes on public viewing nights.

He was predeceased by his parents, Harold Irving, in 1985, and Doris Eleanor, in 2009. Surviving are his brother, Donald and his wife, Margaret, of Yakima, WA.
EMAIL CONTACTS

president@asterism.org
President of AAI

editor@asterism.org
Editor of The Asterism
Kathy Wydner Kawalec, Editor

Deadline for submissions to the newsletter is ~ two weeks prior to its next publication.

membership@asterism.org
AAI Membership Chair

trustees@asterism.org
All three Trustees of AAI

exec@asterism.org
Executive Committee plus Trustees

QOs@asterism.org
All Qualified Observers

info@asterism.org
AAI president, corresponding secretary, and computer services chair

research@asterism.org
Research Committee

technical@asterism.org
Technical Committee

MEMBERSHIP DUES

Regular Membership: $25
Sustaining Membership: $40
Sponsoring Membership: $55
Family (12 Years Old and Up): $10
Youth (Under 12 Years of Age): $5

Sky & Telescope: $32.95
Astronomy subscription: $34

(Subscription renewals to Sky & Telescope and Astronomy can be done directly by AAI members. See “Membership-Dues” on website for details.)

AAI Dues can be paid in person to our Membership Chair, or by mail to: AAI, PO Box 111, Garwood, NJ 07027-0111

DOME DUTY

Feb 21  Team A
Feb 28  Team B
Mar 6   Team C
Mar 13  Team D
Mar 20  Team E
Mar 27  Team A
Apr 3   Team B

FRIDAYS AT SPERRY

February 28, 2020
Medieval Astronomy: What Dante Knew in 1300 AD
Dr. Mary Lou West

March 6, 2020
What’s Up: A Down to Earth Sky Guide
Kathy Vaccari

March 13, 2020
Touching Meteorites Bonnie Witzgall with Al Witzgall

All schedules above were accurate at time of publication. Please check www.asterism.org for latest information

General Membership Meetings are held the third Friday of each month from September to May.

On March 20, 2020
Dr. Blakesley Burnhart of Rutgers will speak on Galaxies as Star-forming Engines.

MEMBER ONLY STAR PARTIES ARE HELD AT
JENNY JUMP STATE PARK
HOPE, NJ
SEVERAL TIMES A YEAR
**Photo Gallery:**
**By Isbel Gonzalez**

**Scorpio and the Milky Way.** The bright object close to Antares is Jupiter. Saturn is the bright star close to the tip of one of the branches of the tree. M 7 (Ptolemy´s Cluster) is easily visible close to the scorpion tail.

Technical details:
10 frames processed and stacked with Photoshop
Camera Nikon
D3000
ISO-1600
f/3.5
10 seg
Date: 07/01/2019. Time: 9:40 pm. Location: 22°03'10.4"N 79°27'33.2"W (Cuba)
Composition of 33 images (selected from about 130) with intervals of approximately 10 minutes (approximately because the whole process was manual, the shutter, the tracking, etc.). I took around 3 pics with high magnification (Barlow lens, 3x) and one with low magnification (whole sun in view) to trace the path for each Mercury position. Total time around 5 hours. 114mm reflector telescope, Nikon 3400 camera, and Baader solar filter. Included here are the final picture (above), an example of high magnification and one of the low magnification pictures, and the equipment (next pages).
Barlow Lens (3x) (above)

Low magnification (whole Sun in view)
The Equipment!

☆   ☆   ☆

☆

☆   ☆   ☆