



The Night Sky

The Newsletter of
The Astronomy Club of Akron
www.acaoh.org

Volume 40 Number 6

June 2018

SUMMER BREAK! NO MEETING AT THE KIWANIS THIS MONTH!

The Presidents Column

By Cathy Loboda

As many of you are traveling to destinations near and far this summer, I want to make you aware of a few dark sky parks featured in recent issues of Northwest Travel and Life and Sunset magazines. These International Dark Sky Association [IDA] sites will lure you away from the hustle and lights of metropolitan areas and place you under some of our country's darkest skies.

IDA has been identifying, preserving, and protecting the night sky over national parks, remote sanctuaries, regions, and communities for 30 years. The association recently celebrated its 100th dark sky designation: Tumacacori National Historical Park in Tumacacori, Arizona. The park is located in the mesquite highlands of southern Arizona and preserves the ruins of three early Spanish colonial missions.

In December 2017, the IDA designated Central Idaho Dark Sky Reserve as a dark sky site and placed it among the ranks of those awarded gold tier status. To date, the gold tier status was awarded to only 12 places world-wide, which includes remote regions found in Namibia and Wales where light pollution is nearly zero. The Central Idaho Dark Sky Reserve encompasses a 1,416 square mile strip of land and will protect some of Idaho's pristine, yet popular, destinations: Ketchum, Sun Valley, and the Sawtooth National Recreation Area. With its glacial valleys and over 10,000 foot peaks, the region resists development and offers many campgrounds and more than 350 miles of trails.

Joshua Tree National Park was named an International Dark Sky Park in August 2017. The park is located in southern California and boasts dark night skies, a rich cultural history, and surreal geologic features.

Merely 15 miles from Phoenix, Fountain Hills in Arizona became the world's 17th International Dark Sky Community in January 2018. The city of nearly 25,000 has been installing special light fixtures to preserve its night sky. Although in close proximity to Phoenix, Fountain Hills is protected from light pollution by the McDowell Mountains.

Utah has the highest number of IDA designated dark sky sites. The newest site, Antelope Island State Park in northern Utah, is the state's ninth dark sky park, giving it more than any other state, province, or region in the world. Antelope Island is the closest designated park to Salt Lake City and offers bison sightings and great sunset hikes from the salty remnants of an ancient lake.



The heart of the Lagoon Nebula where newborn stars are blasting out ultraviolet radiation and hurricane-like winds to create holes, ranges, and mountains of sculpted gas and dust. This image was taken by the Hubble Space Telescope (HST) to commemorate the telescope's 28th year in operation. Image credit: NASA, ESA, and STScI.

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OFFICERS 2018 – 2020

President

Cathy Loboda
Phone: 330-655-2923 E-mail: cnloboda@aol.com

Vice President

Justin Phillips
Phone: E-mail:

Treasurer

Nick Mihiylov
Phone: E-mail: nmihylov@aol.com

Secretary

Terry Taylor
Phone: E-mail:

Assistant Secretary/Treasurer

Ann Ferrell
Phone: 330-697-7279 E-mail: annhagemaster@gmail.com

Observatory Director

Ron Kalinoski
Phone: 330-837-5848

ACA Webmaster

Dave Jessie
Phone: 330-688-9043 E-mail: DJessie@neo.rr.com

Publications Secretary - Editor, Night Sky Newsletter

Marissa Fanady
Phone: 330-531-2443 E-mail: speedymissy@yahoo.com

Trustee

Gregg Crenshaw
E-mail: rigelstarman@gmail.com

Trustee

E-mail:

Trustee

Statutory Agent

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Phone: E-mail:

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May Treasurer's Report

By Nick Mihiylov

5/1/2018 Through 5/31/2018

| | |
|--|-------------------|
| Checking Beginning Balance | \$898.59 |
| Income | |
| Memberships | 30.00 |
| Total Income | \$30.00 |
| Expenses | |
| Speaker Dinner Reimbursement Ck to Dave Jessie | -60.51 |
| Total Expenses | -60.51 |
| Income Less Expenses | -\$30.51 |
| Checking Ending Balance | \$868.08 |
| <hr/> | |
| Savings Beginning Balance | \$2,566.80 |
| Earned Interest | 0.04 |
| Savings Ending Balance | \$2,566.84 |
| <hr/> | |
| Petty Cash Beginning Balance | \$50.00 |
| | 0.00 |
| Petty Cash Ending Balance | \$50.00 |
| <hr/> | |
| Petty Cash | 50.00 |
| Savings | 2,566.84 |
| Checking | 868.08 |
| Grand Total | \$3,484.88 |

Article by Nick Mihiylov
ACA Treasurer.

SWAP & SHOP



FOR SALE:

Orion Sirius 40mm Plossl

Asking: \$25

Contact: Glenn Cameron

Phone: 330-737-1472

Email: glenn@cameronclan.org

FOR SALE:



**Televue Radian
12 mm Eyepiece**

- Excellent condition.

Asking: \$180 (cash)

Contact: Fred Fry

Email:

riverfry@gmail.com

FOR SALE:



**Televue Radian
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- Excellent condition.

Asking: \$180 (cash)

Contact: Fred Fry

Email:

riverfry@gmail.com

FOR SALE:

**Celestron CPC Deluxe 800 HD
Telescope with tripod.**

Accessories:

- Celestron 1.25" eyepiece and filter kit.
- Tele Vue nebula filter.
- Celestron UHC/LPR filter.
- Celestron 15mm 1.25" 82 degree wide field eyepiece.
- Stellarvue 1.25" Dielectric Diagonal.
- Stellarvue 1.25" erecting prism.
- Celestron power tank and dew shield.
- Astrozap sun filter.
- Celestron AC adaptor.
- JMI custom hard shell case for telescope.

All 8 months old, brand new condition.

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FOR SALE:



**Pentax XW 20mm
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Focal length 2032 mm with 406x highest useful power.

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The Presidents Column Con't

In southwestern Utah, IDA's Cedar Breaks National Monument hosts free star parties every Saturday from Memorial Day to Labor Day. The National Monument rangers lead constellation tours and assist in telescope viewings, as well as pointing out any night critters and plants that thrive after dark. At 10,350 feet, Cedar Breaks is proud to claim the highest regularly scheduled astronomy program of any national park.

Montana is known as Big Sky Country and it was no surprise when Waterton and Glacier National Parks were designated as a collective International Dark Sky Park in 2017. Park rangers and local astronomers often lead day programs and night star-viewing sessions during the summer months.

Located in New Mexico's Gila Wilderness, the remote Cosmic Campground and International Dark Sky Sanctuary [CCIDSS] is 40 miles away from the nearest source of artificial light. It is the first International Dark Sky Sanctuary located on National Forest System lands in North America. CCIDSS offers a 360 degree unobstructed view of the night sky and hosts star parties in cooperation with its partner group, Friends of the Cosmic Campground.

If travel is not in your summer plans this year, keep the mentioned dark sky sites in mind for the future. Little can place you in a state of awe as quickly as gazing at a truly dark night sky.

Best wishes for a summer filled with clear night skies!

*Article By Cathy Loboda,
ACA President*

"Remember to look up at the stars and not down at your feet. Try to make sense of what you see, wonder about what makes the universe exist" - Dr. Stephen Hawking

June Astronomical Events

Day Hour(UT)

1 01 Saturn 1°.6 S. of Moon
2 17 Moon at apogee
3 12 Mars 3° S. of Moon
6 02 Mercury in superior conjunction
6 18 Neptune 2° N. of Moon
6 19 LAST QUARTER
9 01 Venus 5° S. of Pollux
10 03 Uranus 5° N. of Moon
13 20 NEW MOON
15 00 Moon at perigee
16 13 Venus 2° N. of Moon
19 12 Neptune stationary
19 20 Vesta at opposition
20 11 FIRST QUARTER
21 10 Solstice
23 19 Jupiter 4° S. of Moon
25 16 Mercury 5° S. of Pollux
27 09 Vesta 0°.3 S. of Moon Occn.
27 13 Saturn at opposition
28 04 Saturn 1°.8 S. of Moon
28 05 FULL MOON
28 14 Mars stationary
30 03 Moon at apogee

*Information Credited,
Her Majesty's Nautical Almanac Office,
United Kingdom Hydrographic Office.
US Naval Observatory.*

July Astronomical Events

Day Hour(UT)

1 02 Mars 5° S. of Moon
4 00 Neptune 3° N. of Moon
6 08 LAST QUARTER
6 17 Earth at aphelion
7 14 Uranus 5° N. of Moon
9 20 Venus 1°.1 N. of Regulus
10 10 Aldebaran 1°.1 S. of Moon Occn.
11 04 Jupiter stationary
12 05 Mercury greatest elong. E. (26°)
12 10 Pluto at opposition
13 03 NEW MOON Eclipse
13 08 Moon at perigee
14 22 Mercury 2° S. of Moon
16 04 Venus 1°.6 S. of Moon
19 20 FIRST QUARTER
21 00 Jupiter 4° S. of Moon
25 06 Saturn 2° S. of Moon
25 07 Mercury stationary
27 05 Mars at opposition
27 06 Moon at apogee
27 20 FULL MOON Eclipse
27 22 Mars 7° S. of Moon
31 06 Neptune 3° N. of Moon
31 08 Mars closest approach

ACA NEWS AND NOTES

JUNE 2018

ACA Meetings

ACA membership meetings are now suspended for the summer. Meetings will resume with our September meeting scheduled for 8:00 p.m. on Friday, September 28th. Membership fees are due for the upcoming year on or before that date. Feel free to mail your dues to treasurer Nick Mihiylov at:

The Astronomy Club of Akron
c/o Nick Mihiylov
13495 Mogadore Avenue NW
Uniontown, Ohio 44685-9347

Membership dues pays for observatory maintenance and insurance, dinner for our guest speakers, membership picnic entree, pavilion fees, and any costs incurred in support of our outreach programs. Your membership is needed and much appreciated!

Members Social

ACA members mark your calendars! Our annual ACA summer picnic is scheduled for Sunday, August 26th at the Big Oaks Shelter in Portage Lakes State Park. The picnic is scheduled for 3:00 p.m. ACA will provide the burgers, dogs, buns, condiments, drinks, and paper products. Members attending will bring a dish to share. RSVP to President Cathy Loboda at cnloboda@aol.com before August 15th if you plan to attend. Note in your email the number in your family attending and what you plan to bring to the annual potluck picnic.

Star Parties

Upcoming Star Parties are scheduled for June 16th and July 7th at 9:00 p.m. and July 14th at 8:45 p.m. Stop in at the ACA Observatory and support these outreach events!

MVAS OTAA Convention

Mark your calendars! The Mahoning Valley Astronomical Society [MVAS] will host the Ohio Turnpike Astronomers Association Convention [OTAA] on Saturday, August 11th. A number of ACA members attend this well-planned annual event. If you have never gone, consider going this year. A potluck dinner, program, and raffle are followed by an observation session under dark skies. This event occurs rain or shine. Please support our fellow OTAA club member and attend!

The Willamette Meteorite

By Marissa Fanady



The Willamette meteorite nestled safely on display at the Smithsonian American Museum of Natural History in New York. Image credit: Dante Alighieri.

Meteorites are exceedingly rare gems that must fight to survive the atmospheric friction they face during their fall to earth. Then they must endure the forces of nature working very slowly to terrestrialize them, making these space rocks one with the planet and virtually unrecognizable. A dry desert environment can preserve the rocks long enough to allow us to find and study these objects or a large iron meteorite is durable enough to withstand a wet environment such as Ohio's climate. Unfortunately even in our hands they all are still slowly being transformed due to the moisture in the air and by the oils in our hands. Most meteorites are pretty small, you are lucky if you find one over a pound. Stone meteorites are the most common type to fall, followed by the irons, and lastly the extremely rare stony-iron meteorites. Any rock making it to the ground is a miracle, but every now and then a massive space rock plummets to earth and we are gifted with a meteorite weighing tons! In this article I am going to introduce you to one of these gigantic extraterrestrial objects that was once part of the core of an asteroid...ladies and gents I give you the Willamette Meteorite.

The Willamette meteorite was found in 1902 in the town of Willamette, Oregon and is classified as a type IIIAB medium octahedrite iron meteorite. This incredible space rock weighs an astonishing 15.5 tons or 32,000 pounds, making this space gem the largest meteorite found in the United States and the sixth largest meteorite in the world! This beautiful rock measures four feet six inches high, ten feet three inches at its longest dimension, and six feet six inches at its shortest dimension. The massive iron was not discovered in its original resting place, no crater was found at the scene where the mass lain. Such a huge

space rock would have created a crater or impact pit upon penetrating the ground. Glaciers from the last ice age transported the stone and dropped it on what is now Willamette Oregon some 13,000 years ago. Falling through the planets' atmosphere gave a bell shape to the mass due to the fact that during the fall the object remained stable. The orientation gave the stone a cone shape on the leading side and a flat back on the trailing end. Orientated meteorites are a rare phenomenon so finding such a massive iron meteorite that is orientated is extremely rare. The large cavities seen on the blunt flat face formed from the weathering process that slowly eats away all meteorites. Softer metal nodules called troilite are the first metals inside iron meteorites to be weathered away, this leaves behind holes in the space rock and creates a very outer space look for the object. The Willamette meteorite is not only aesthetically beautiful and a very rare large gift from the universe, it also has a very interesting and rather humorous history that makes this mini asteroid even more enjoyable.

A gentleman named Ellis Hughes noticed the huge odd stone while cutting wood and guessed by its odd shape that it may be a meteorite. He was indeed correct which is not too common since most "odd rocks" found randomly by people are not extraterrestrial in origin. The only problem is that the rock was not on his property, it was on the property next to his that was owned by Oregon Iron and Steel Company; in the United States wherever a meteorite settles the landowner now owns that meteorite. Mrs. Hughes, probably seeing some worth in this object, urged her husband to move the space rock onto their property which was a distance of three quarters of a mile. The terrain was rugged and with only himself, his fifteen year old son, and an old horse he managed to steal this great iron meteorite. Hughes cleared a path to his property and had built a wagon as well as a capstan to move the object. On a very good day he would move the mass only about 150 feet and on a bad day it would be bogged down by mud and just getting the meteorite out was a monumental task that saw no progress getting the iron alien closer to his property. At last after three months of hard work the mass was finally over the property line and in his front yard. A shed was built over the meteorite and Ellis charged twenty-five cents admission to see the space rock, people from all over came to see the mass and Ellis and his wife were very pleased to make a profit. Not only did it draw in scientists who authenticated the meteorite, the original owners caught wind of this discovery and heard that the meteorite was stolen from their property....now they want it back.

Rumors spread in newspapers that reported the meteorite was possibly stolen from the adjacent property and with the object making a profit the company sent an attorney to investigate this claim. He went to go see the huge iron body and he noticed the path that was created while transporting the rock and he followed it right back to the company's property. Yes you read that right, Hughes didn't cover up the evidence of his heist!!!! Fifty dollars was offered for the meteorite by the attorney but this was refused, later he received a court summons to have a legal battle over ownership; the Oregon

Iron and Steel Company wanted the rock back and rightfully so. Hughes' only argument was that this meteorite was a sacred relic of the Clackamas Indians, no longer being used, and that made the stone private property free for anyone to take. The court didn't buy this argument and they awarded custody of the space rock to the company and valued the meteorite at \$150. Folks, this is a laughably low price for the largest American meteorite in history even in the early 1900s!!!!!! Well Ellis appealed the decision and before the second court hearing his other neighbors' made claims that it was stolen from their lands. The court still decided in favor of the company and this time the meteorite was valued at \$10,000 which is much better, so far no other meteorite has gone up in value so fast!!!

People were clawing and pining for this object like it was the hope diamond and while the custody battle raged on the meteorite was kept guarded by the county sheriff, Harold Johnson. Residing at his home in the front yard it was to be protected around the clock and unbelievably people tried to steal pieces off of the iron mass. They would hammer at the meteorite and when they did the meteorite would ring like a bell which in turn awoke Johnson from his sleep, he'd run out of his house with a gun. Yup the story of our largest iron meteorite is a very entertaining and colorful tale and in the end the original owners got their space rock returned, only to turn around and sell the meteorite to the Smithsonian for a nice profit of \$26,000. But even the Smithsonian had custody troubles! Years later the descendants of the Clackamas Indians wanted the sacred stone of their ancestors returned and an agreement was struck between them and the museum. The meteorite would remain in the museum and the tribal descendants are allowed an annual visit to the meteorite for ceremonial purposes. The moral of the story...do not steal meteorites!!! If you want a meteorite then go through the proper channels as best you can to obtain the extraterrestrial object. Even some countries require an export permit to take or send any meteorites out of the country. Yes that seems crazy for a "rock" but some countries value their space gems and they really should. After all, it's not every day that one discovers a meteorite, especially a 15.5 ton behemoth!

Information credit:

<https://www.amnh.org/exhibitions/permanent-exhibitions/rose-center-for-earth-and-space/dorothy-and-lewis-b.-cullman-hall-of-the-universe/planets/planetary-impacts/the-willamette-meteorite>

<https://www.meteorite.com/willamette-meteorite/>

https://en.wikipedia.org/wiki/Willamette_Meteorite

*Article By Marissa Fanady
ACA Publications Secretary*

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Newsletter of the Astronomy Club of Akron

c/o Marissa Fanady, Editor

1134 North Ave.

Tallmadge OH, 44278

The Astronomy Club of Akron

c/o Nick Mihiylov

13495 Mogadore Avenue NW

Uniontown, Ohio 44685-9347

Yes! I want to become a member of the Astronomy Club of Akron

www.acaoh.org

(PLEASE PRINT)

NAME: _____ PHONE: _____

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Astronomy Club of Akron annual memberships renew in the month of September.

ADULT (ages 18 and older) ___\$30.00

JUNIOR (ages 12 to 17) _____\$15.00

ADDITIONAL ADULT member ___\$15.00

FAMILY MEMBERSHIP _____\$40.00

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