



the Skyscraper

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October 2021

AMATEUR ASTRONOMICAL SOCIETY OF RHODE ISLAND * 47 PEEPTOAD ROAD * NORTH SCITUATE, RHODE ISLAND 02857 * WWW.THESKYSCRAPERS.ORG

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AstroAssembly 2021

A presentation by Thomas Spirock
Saturday, October 2 at Seagrave Memorial Observatory & Zoom

All day Saturday at Seagrave Observatory

Poster Session, Swap Table (please bring your own table), Solar Viewing, Astrophotography Contest, Homemade Telescopes (bring yours!), Famous Astro Bake-off Contest.

10:45 AM Dedication of Memorial Garden

11:30 AM Boxed Deli Lunch

12:30 PM "Remembering the Life of Leslie Peletier" by Rick Lynch, Skyscrapers, Inc.

2:00 PM "Increasing Science Capabilities in the Apollo Lunar Exploration Program: Perspectives for Artemis" by James Head, Brown University

3:30 PM Door Prizes Awarded

3:45 PM "Extraterrestrial Life: Are We the Sharpest Cookies in the Jar?" by Avi Loeb, Harvard-Smithsonian Center for Astrophysics

5:30 PM Dinner Break

Dine on your own at a local restaurant. A list of suggestions will be available.

7:00 PM "A Recent Visit to Warner and Swasey Observatory" by Rick Lynch, Skyscrapers, Inc.

8 PM Observing at Seagrave Memorial Observatory

The observatory's telescopes will be available for observing (weather permitting), or set up your own telescope on the grounds.

International Observe the Moon Night

OCTOBER 16 2021



Join the global celebration!

- Look at the Moon
- Attend an event
- Host your own
- Watch Moon videos
- Create Moon-inspired art
- Start a Moon observation journal
- Listen to Moon-themed music
- and more...



moon.nasa.gov/observe
#ObserveTheMoon



Skylights: October 2021

by Jim Hendrickson

October is a month that brings notable seasonal change. Not only are the leaves changing color, but the nights are getting substantially longer and cooler. Beginning October 17th, sunrises will occur after 7am, and the following day, sunsets will occur before 6pm.

We will soon have our first frost, and the night singing insects will soon be silent. Perhaps a single, slow-chirping katydid in a distant tree or a lone cricket hanging on the last patch of warm grass holds back the natural silence that comes with the season.

The stars of summer are now distinctly in the western half of the sky. Our familiar Big Dipper is resting low in the northwest, and Fomalhaut now resides in the southern sky.

Mercury passes inferior conjunction on October 10 and returns to the morning sky for one of the more favorable apparitions of the year, reaching a maximum western elongation of 18° on the 25th. The steep angle of the ecliptic with respect to the hori-

zon should allow for spotting Mercury's crescent phase about mid-month. .

Venus continues its southward march above the southwestern horizon, passing 1.5° north of Antares on the 16th, and reaching its greatest elongation of 47° east of the Sun on the 27th. On this date, Venus will appear as a 50% quarter phase, and will appear as an enlarging crescent thereafter. The waxing crescent Moon will make a striking pairing with Venus on the 9th.

Mars reaches conjunction on October 8. Mars is the only planet for which the interval between successive conjunctions, known as its synodic period, is greater than two Earth years, significantly longer than any other planet. As such, cycles of Mars persist over multiple cycles of any other planet. Since the last conjunction of Mars in September 2019, three spacecraft were launched towards and arrived at the red planet. Mars will reappear in the morning sky by the end of the year, on its way to a

Events in October

- 6 **New Moon**
- 7 Mars Conjunction
- 9 Moon & Venus (2.0°)
- 12 **First Quarter Moon**
- 13 Venus & M80 (1.4°)
- 13 Moon & Saturn (5.9°)
- 16 Venus & Antares (1.4°)
- 17 Moon & Neptune (5.3°)
- 20 **Full Hunter's Moon**
- 21 Moon & Uranus (1.8°)
- 23 Venus & M19 (0.1°)
- 25 Mercury Greatest Elongation (W 18°)
- 27 Venus Greatest Elongation (E 47°)
- 28 **Last Quarter Moon**

Times in Eastern Daylight Time (UTC-4). Ephemeris times are for Seagrave Observatory (41.845N, 71.590W)

December 2022 opposition in Taurus.

Jupiter and Saturn rule the early evening sky in Capricornus, but notice how by midnight, they're becoming low in the southwest. The waxing gibbous Moon passes below Saturn and Jupiter on the 13th, 14th



Monthly Presentation Videos on YouTube

With our monthly meetings going virtual this year, we have begun to record and publish, with permission, our monthly Zoom presentations on the Skyscrapers YouTube channel. Go to the URL below to view recent presentations.

<https://www.youtube.com/channel/UCEZ5UnO-Sly0DXsSrUAXONg>



The Skyscraper is published monthly by Skyscrapers, Inc. Meetings are held monthly, usually on the first or second Friday or Saturday of the month. Seagrave Memorial Observatory is open every Saturday night, weather permitting.

Directions

Directions to Seagrave Memorial Observatory are located on the back page of this newsletter.

Submissions

Submissions to *The Skyscraper* are always welcome. Please submit items for the newsletter no later than **October 15** to Jim Hendrickson, 1 Sunflower Circle, North Providence, RI 02911 or e-mail to jim@distantgalaxy.com.

E-mail subscriptions

To receive *The Skyscraper* by e-mail, send e-mail with your name and address to jim@distantgalaxy.com. Note that you will no longer receive the newsletter by postal mail.

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and 15th.

The Full Hunter's Moon occurs on October 20, with moonrise at 7:13pm.

The month's planetary focus is Uranus. Although it doesn't come to opposition until the first week of November, now is a good time to begin tracking it in the evening sky, and even try an observing challenge.

Spotting the teal-hued ice giant is fairly easy, and the best tool for locating Uranus is binoculars--a 50mm pair works best. Start the journey by drawing an imaginary line between Hamal (Alpha Arietis) to Menkar (Alpha Ceti). From the midpoint of this line, move east (left), towards the Pleiades,

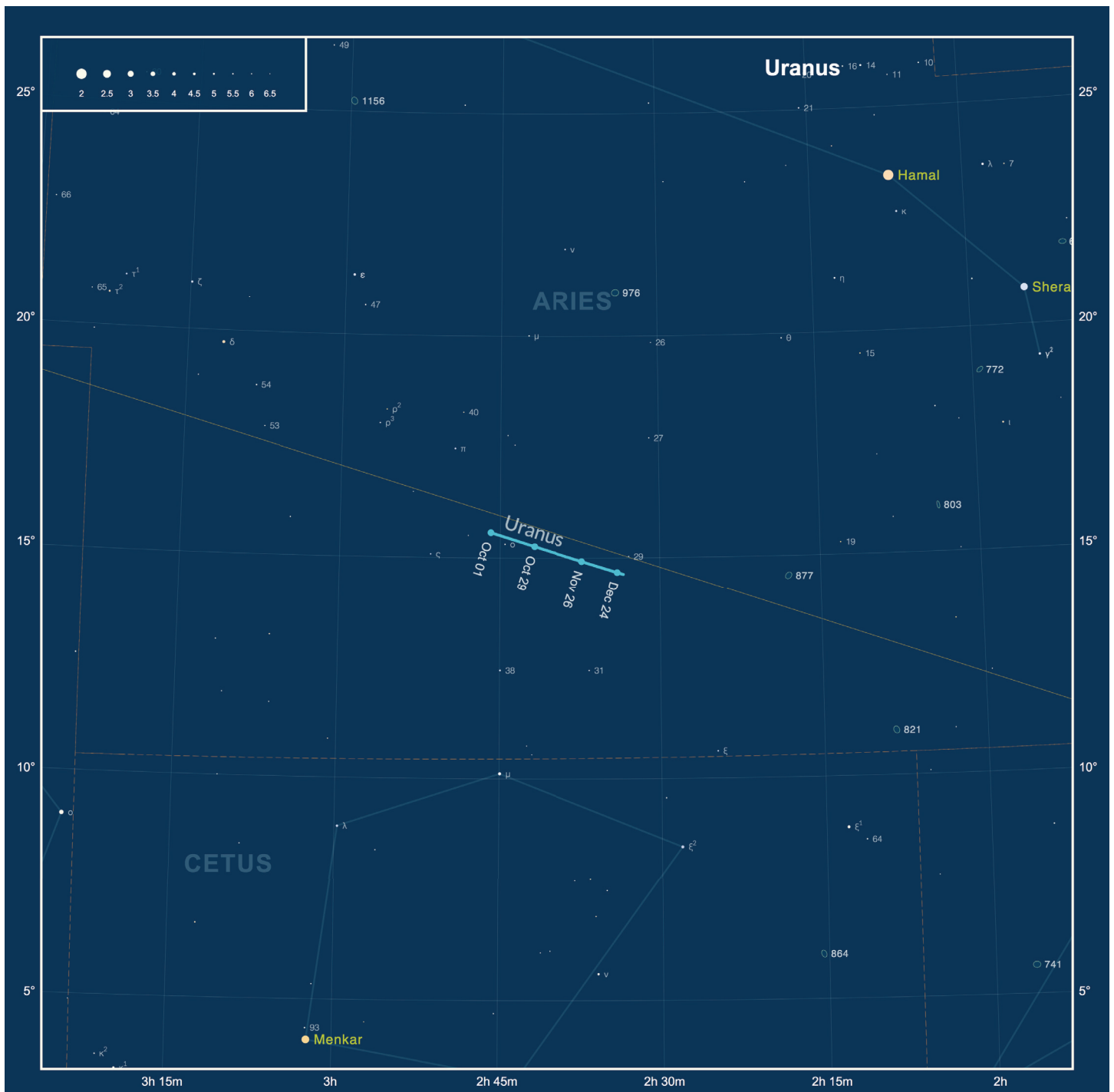
by about 4 Moon diameters (2°). Here, you should be centered on a slightly asymmetric zig-zag asterism consisting of five 5th and 6th magnitude stars. The five stars are, from east to west, Pi, Sigma, Omicron, 31, and 38 Arietis. It may resemble a pattern similar to the W asterism of Cassiopeia, with the open ends of the W pointing back towards Hamal. Now look at the center star of the W, Omicron Arietis, and you may find a similarly bright object a little to the west of this star. This is Uranus, 18.7 AU away.

Familiarize yourself with the stars in this field of view, and come back to it on subsequent nights to note how Uranus moves

among them. Try to find a dark sky and observe on a moonless night. Remove the binoculars and try to see if you can spot it without optical aid. Uranus is just bright enough, at magnitude 5.7, to be visible under ideal conditions. It also helps to wait until Uranus is highest in the sky, around 1:00am.

Another aid to locating Uranus, the just past Full Moon is just 2° south of Uranus on the 21st.

Finally, don't forget to continue watching the minor planets Pallas and Ceres. Pallas is in Aquarius, only a few degrees from Neptune, and Ceres begins moving retrograde just a few degrees southeast of Aldebaran.



Weird Ways to Observe the Moon

By David Prosper

International Observe the Moon Night is on October 16 this year— but you can observe the Moon whenever it's up, day or night! While binoculars and telescopes certainly reveal incredible details of our neighbor's surface, bringing out dark seas, bright craters, and numerous odd fissures and cracks, these tools are not the only way to observe details about our Moon. There are more ways to observe the Moon than you might expect, just using common household materials.

Put on a pair of sunglasses, especially **polarized sunglasses!** You may think this is a joke, but the point of polarized sunglasses is to dramatically reduce glare, and so they allow your eyes to pick out some lunar details!

Surprisingly, wearing sunglasses even helps during daytime observations of the Moon.

One unlikely tool is the humble **plastic bottle cap!** John Goss from the Roanoke Valley Astronomical Society shared these directions on how to make your own bottle cap lunar viewer, which was also suggested to him by Fred Schaaf many years ago as a way to also view the thin crescent of Venus when close to the Sun:

“The full Moon is very bright, so much that details are overwhelmed by the glare. Here is an easy way to see more! Start by drilling a 1/16-inch (1.5 mm) diameter hole in a plastic soft drink bottle cap. Make sure it is an unobstructed, round hole. Now look through the hole at the bright Moon.

The image brightness will be much dimmer than normal – over 90% dimmer – reducing or eliminating any lunar glare. The image should also be much sharper because the bottle cap blocks light from entering the outer portion of your pupil, where imperfections of the eye's curving optical path likely lie.” Many report seeing a startling amount of lunar detail!

You can **project the Moon!** Have you heard of a “Sun Funnel”? It's a way to safely view the Sun by projecting the image from an eyepiece to fabric stretched across a funnel mounted on top. It's easy to make at home, too – directions are here: bit.ly/sunfunnel. Depending on your equipment, a Sun Funnel can view the Moon as well as the Sun— a full Moon gives off more than enough light to project from even relative-



Sun Funnels in action! Starting clockwise from the bottom left, a standalone Sun Funnel; attached to a small refractor to observe the transit of Mercury in 2019; attached to a large telescope in preparation for evening lunar observing; projection of the Moon onto a funnel from a medium-size scope (5 inches).

Safety tip: NEVER use a large telescope with a Sun Funnel to observe the Sun, as they are designed to project the Sun using small telescopes only. Some eager astronomers have melted their Sun Funnels, and parts of their own telescopes, by pointing them at the Sun - large telescopes create far too much heat, sometimes within seconds! However, large instruments are safe and ideal for projecting the much dimmer Moon. Small telescopes can't gather enough light to decently project the Moon, but larger scopes will work.

You can download and print NASA's observer's map of the Moon for International Observe the Moon Night! This map shows the view from the Northern Hemisphere on October 16 with the seas labeled, but you can download both this map and one of for Southern Hemisphere observers, at: bit.ly/moonmap2021 The maps contain multiple pages of observing tips, not just this one.



International OBSERVE
THE MOON NIGHT 2021

SATURDAY
OCTOBER 16TH



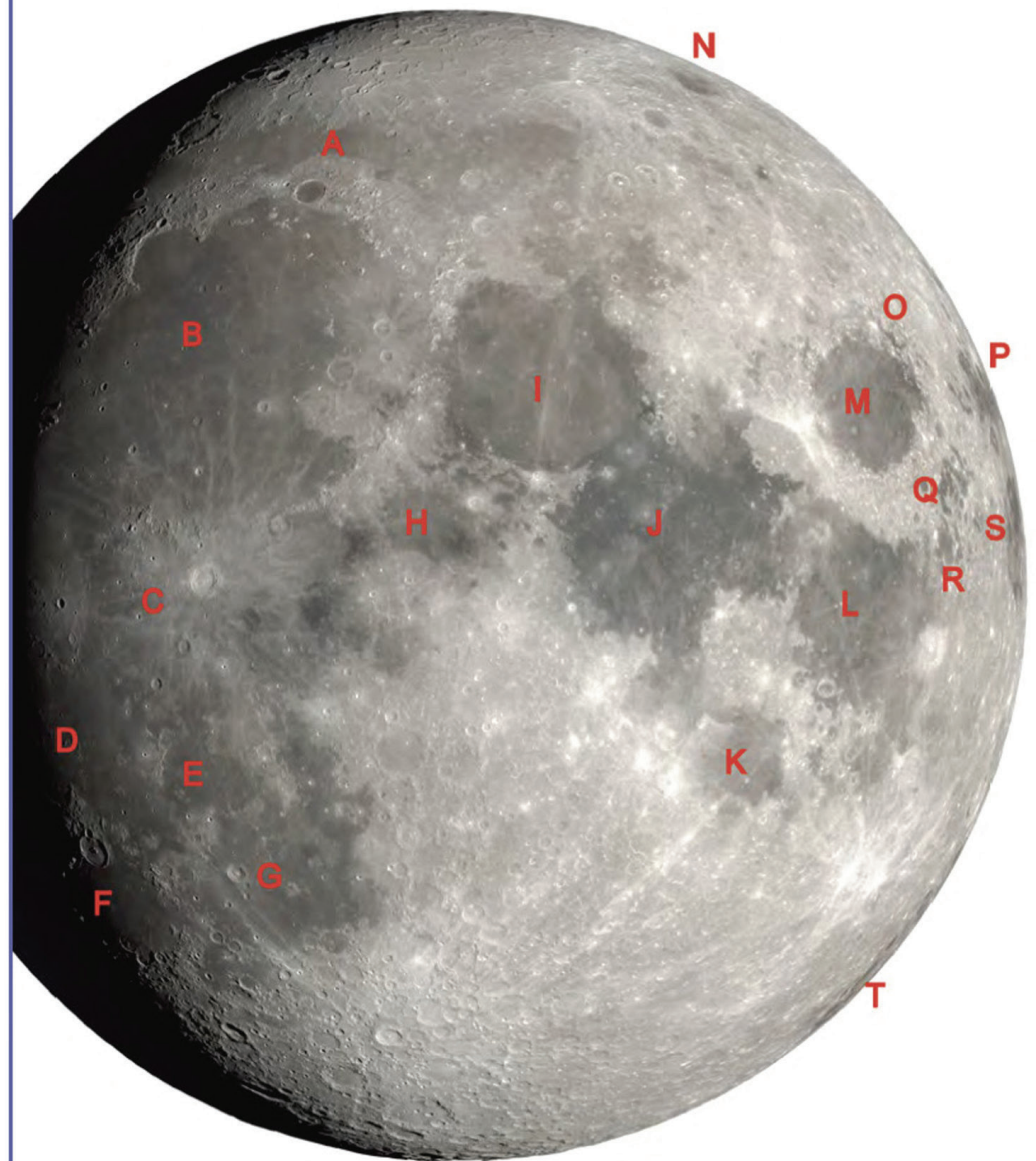
NORTHERN HEMISPHERE MOON MAP WITH
LUNAR MARIA (SEAS OF BASALT)

Moon Map

This map was created for International Observe the Moon Night 2021. It depicts the Moon as it will appear from the northern hemisphere at approximately 11:00 PM EDT on October 16, 2021 (3:00 AM UTC on October 17).

Lunar Maria (Seas of Basalt)

You can see a number of maria tonight. Once thought to be seas of water, these are actually large, flat plains of solidified basaltic lava. They can be viewed in binoculars or even with the unaided eye. Tonight, you may be able to identify 18 maria on the Moon. This includes four seas along the eastern edge that are often hard to see. Because of libration, a slight apparent wobble by the Moon in its orbit around Earth, tonight we get to peek slightly around the northeast edge of the Moon, glimpsing a sliver of terrain normally on the Moon's far side.



Map generated with NASA's Dial-A-Moon (<https://svs.gsfc.nasa.gov/4874>)

- | | | |
|--|--|---------------------------------|
| A. Mare Frigoris (Sea of Cold) | H. Mare Vaporum (Sea of Vapors) | O. Mare Anguis (Serpent Sea) |
| B. Mare Imbrium (Sea of Rains) | I. Mare Serenitatis (Sea of Serenity) | P. Mare Marginis (Border Sea) |
| C. Mare Insularum (Sea of Isles) | J. Mare Tranquillitatis (Sea of Tranquility) | Q. Mare Undarum (Sea of Waves) |
| D. Oceanus Procellarum (Ocean of Storms) | K. Mare Nectaris (Sea of Nectar) | R. Mare Spumans (Sea of Foam) |
| E. Mare Cognitum (Known Sea) | L. Mare Fecunditatis (Sea of Fertility) | S. Mare Smythii (Smyth's Sea) |
| F. Mare Humorum (Sea of Moisture) | M. Mare Crisium (Sea of Crises) | T. Mare Australe (Southern Sea) |
| G. Mare Nubium (Sea of Clouds) | N. Mare Humboldtianum (Humboldt's Sea) | |



ly small telescopes. Large telescopes will project the full Moon and its phases, with varying levels of detail; while not as crisp as direct eyepiece viewing, it's still an impressive sight! You can also mount your smartphone or tablet to your eyepiece for a similar Moon-viewing experience, but the funnel doesn't need batteries.

Of course, you can join folks in person or online for a celebration of our Moon on October 16, with International Observe the Moon Night – find details at moon.nasa.gov/observe. NASA has big plans for a return to the Moon with the Artemis program, and you can find the latest news on their upcoming lunar explorations at nasa.gov.



This article is distributed by NASA Night Sky Network. The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!



Book Review

Mystery of the Ashen Light of Venus: Investigating a 400-Year-Old Phenomenon

by John C. Barentine, Ph. D., Springer International Publishing, 2021, ISBN 978-3-030-72714-7, softcover, \$29.99 US

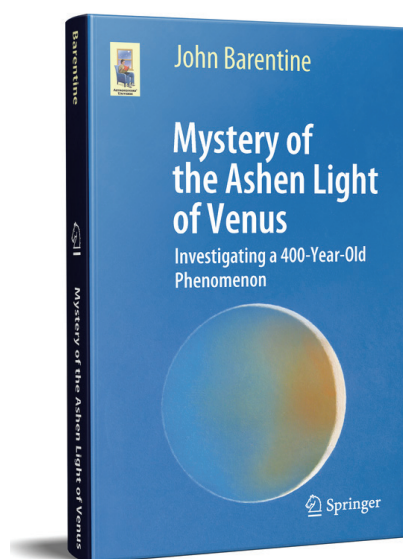
Reviewed by Francine Jackson

Several months ago, I was asked to [write several paragraphs](#) on the Ashen Light. I really wish I had had this book then.

What exactly is the Ashen Light? This is light coming from the planet Venus that has been observed for hundreds of years by both professional astronomers and seasoned amateurs. But, not by every observer. And, not all at the same time or phase in Venus's orbit. Also, it doesn't seem to always have the same physical appearance. Finally, it has never been photographed. What is happening?

The author takes great pains to prove to the reader that this phenomenon does seem real. He quotes researchers who have spent years attempting to not only observe, but understand what potentially could be happening at Venus. Too many observers have acknowledged its presence through the centuries to dismiss the unique lighting that they have actually seen and documented. And, many have tried to explain

this Ashen Light, either by exact scientific explanations and testing - such as by means of the planet's interactions with such as coronal mass ejections – or admittedly off the wall – bonfires on the surface to acknowl-



edge new leaders. But, although there have been many confirmations of the Ashen Light, there hasn't been any true agreement as to its physical appearance.

In an attempt to understand the complexity of the sightings, the author went so far as to contact an expert in vision science, who, as an example, could perceive the possibility of the observer's brain "filling in" information where it might not really exist, such as the "duck-rabbit" scenario.

In retrospect, the author could have had the reader wonder whether the Ashen Light is simply a play on the observer's senses, such as the Martian canals or the inner planet Vulcan. But, he didn't, although, is there a possibility the Ashen Light could be just as "real" as those? Or, is it a true, but elusive, phenomenon? Keep an open mind when you read this book, and, if you are a Venus observer, come to your own conclusion.

You may be surprised.

The Sun, Moon & Planets in October

This table contains the ephemeris of the objects in the Solar System for each Saturday night in October 2021. Times in Eastern Daylight Time (UTC-4). Ephemeris times are for Seagrave Observatory (41.845N, 71.590W).

Object	Date	RA	Dec	Const	Mag	Size	Elong	Phase(%)	Dist(S)	Dist(E)	Rise	Transit	Set
Sun	2	12 33.1	-3 34.6	Vir	-26.8	1917.3	-	-	-	1	06:44	12:35	18:26
	9	12 58.7	-6 15.9	Vir	-26.8	1921.2	-	-	-	1	06:51	12:33	18:14
	16	13 24.5	-8 53.2	Vir	-26.8	1925.1	-	-	-	1	06:59	12:31	18:03
	23	13 50.9	-11 24.1	Vir	-26.8	1928.9	-	-	-	1	07:07	12:30	17:52
	30	14 17.8	-13 46.7	Vir	-26.8	1932.5	-	-	-	0.99	07:16	12:29	17:43
Moon	2	9 03.5	20 53.9	Cnc	-11.0	1830.8	57° W	23	-	-	01:59	09:34	16:58
	9	15 10.7	-17 33.0	Lib	-10.1	1973.3	35° E	9	-	-	10:38	15:33	20:21
	16	22 11.9	-17 33.6	Aqr	-12.4	1882.3	126° E	79	-	-	16:44	22:08	03:41
	23	3 38.4	18 10.1	Tau	-12.5	1779.4	154° W	95	-	-	19:34	03:13	11:01
	30	9 37.5	18 47.9	Leo	-11.6	1826.3	77° W	39	-	-	00:48	08:13	15:27
Mercury	2	13 23.9	-12 39.5	Vir	1.8	9.7	15° E	14	0.38	0.69	08:06	13:22	18:38
	9	13 00.9	-8 46.8	Vir	5.4	10.2	3° E	0	0.34	0.66	06:59	12:30	18:02
	16	12 39.9	-4 04.3	Vir	1.9	9.1	12° W	13	0.31	0.74	05:56	11:44	17:32
	23	12 46.1	-3 02.4	Vir	-0.2	7.3	18° W	46	0.31	0.92	05:33	11:25	17:16
	30	13 15.3	-5 40.5	Vir	-0.7	6.1	17° W	73	0.34	1.11	05:46	11:28	17:09
Venus	2	15 23.9	-20 57.0	Lib	-4.1	19.2	45° E	62	0.73	0.88	10:44	15:27	20:08
	9	15 55.9	-23 08.4	Sco	-4.1	20.5	46° E	59	0.73	0.83	10:58	15:31	20:03
	16	16 28.1	-24 53.6	Sco	-4.2	21.9	46° E	56	0.73	0.77	11:11	15:36	20:00
	23	17 00.2	-26 10.4	Oph	-4.2	23.5	47° E	53	0.73	0.72	11:21	15:40	19:59
	30	17 31.8	-26 57.3	Oph	-4.3	25.4	47° E	49	0.73	0.67	11:29	15:44	19:59
Mars	2	12 41.7	-3 43.8	Vir	1.7	3.6	2° E	100	1.63	2.63	06:54	12:43	18:31
	9	12 58.6	-5 33.8	Vir	1.7	3.6	1° W	100	1.63	2.63	06:50	12:32	18:14
	16	13 15.8	-7 22.4	Vir	1.7	3.6	3° W	100	1.62	2.62	06:46	12:22	17:57
	23	13 33.1	-9 09.0	Vir	1.7	3.6	5° W	100	1.62	2.61	06:42	12:12	17:40
	30	13 50.8	-10 53.0	Vir	1.7	3.6	7° W	100	1.61	2.59	06:39	12:02	17:24
1 Ceres	2	4 47.7	16 12.6	Tau	8.3	0.6	116° W	97	2.79	2.20	21:46	04:48	11:51
	9	4 48.4	16 18.9	Tau	8.1	0.6	123° W	98	2.78	2.11	21:19	04:22	11:25
	16	4 47.9	16 24.6	Tau	8.0	0.6	130° W	98	2.78	2.03	20:50	03:53	10:57
	23	4 45.9	16 30.0	Tau	7.8	0.6	137° W	98	2.77	1.96	20:20	03:24	10:27
	30	4 42.7	16 35.4	Tau	7.7	0.7	145° W	99	2.77	1.89	19:45	02:49	09:53
Jupiter	2	21 42.1	-15 02.4	Cap	-2.6	46.1	134° E	99	5.01	4.27	16:33	21:40	02:46
	9	21 40.9	-15 07.5	Cap	-2.5	45.2	127° E	99	5.01	4.35	16:05	21:11	02:17
	16	21 40.3	-15 09.3	Cap	-2.5	44.3	119° E	99	5.01	4.44	15:37	20:43	01:49
	23	21 40.4	-15 07.8	Cap	-2.4	43.3	113° E	99	5.01	4.54	15:09	20:16	01:22
	30	21 41.2	-15 03.1	Cap	-2.4	42.4	106° E	99	5.01	4.64	14:42	19:49	00:56
Saturn	2	20 38.3	-19 19.6	Cap	0.5	17.6	118° E	100	9.94	9.43	15:47	20:36	01:26
	9	20 38.0	-19 20.6	Cap	0.5	17.4	111° E	100	9.94	9.54	15:19	20:09	00:58
	16	20 38.0	-19 20.4	Cap	0.6	17.2	104° E	100	9.94	9.65	14:52	19:41	00:30
	23	20 38.5	-19 18.8	Cap	0.6	17.0	97° E	100	9.93	9.76	14:25	19:14	00:03
	30	20 39.2	-19 16.0	Cap	0.6	16.8	90° E	100	9.93	9.88	13:58	18:47	23:37
Uranus	2	2 47.0	15 39.4	Ari	5.7	3.7	145° W	100	19.74	18.91	19:44	02:44	09:44
	9	2 46.1	15 35.2	Ari	5.7	3.7	152° W	100	19.73	18.85	19:16	02:15	09:15
	16	2 45.0	15 30.7	Ari	5.7	3.7	159° W	100	19.73	18.80	18:47	01:47	08:46
	23	2 44.0	15 25.8	Ari	5.7	3.8	166° W	100	19.73	18.76	18:19	01:18	08:18
	30	2 42.9	15 20.7	Ari	5.7	3.8	174° W	100	19.73	18.74	17:51	00:50	07:49
Neptune	2	23 29.9	-4 31.3	Aqr	7.8	2.4	162° E	100	29.92	28.97	17:42	23:27	05:13
	9	23 29.3	-4 35.4	Aqr	7.8	2.4	155° E	100	29.92	29.01	17:14	22:59	04:45
	16	23 28.7	-4 39.2	Aqr	7.8	2.3	148° E	100	29.92	29.07	16:46	22:31	04:16
	23	23 28.1	-4 42.6	Aqr	7.8	2.3	141° E	100	29.92	29.14	16:18	22:03	03:48
	30	23 27.6	-4 45.6	Aqr	7.8	2.3	134° E	100	29.92	29.22	15:50	21:35	03:20
Pluto	2	19 46.1	-22 52.7	Sgr	14.4	0.2	105° E	100	34.37	34.10	15:10	19:44	00:18
	9	19 46.1	-22 53.0	Sgr	14.4	0.2	98° E	100	34.38	34.22	14:43	19:17	23:51
	16	19 46.2	-22 53.1	Sgr	14.4	0.2	91° E	100	34.38	34.34	14:16	18:49	23:23
	23	19 46.4	-22 52.9	Sgr	14.4	0.2	85° E	100	34.39	34.47	13:48	18:22	22:56
	30	19 46.7	-22 52.4	Sgr	14.4	0.2	78° E	100	34.39	34.59	13:21	17:55	22:29

Emission Nebula in Cygnus: NGC 6857

by Glenn Chaple for LVAS
(Magnitude 11.4, Size 40")

Astronomical literature notes that this month's Observer's Challenge, NGC 6857, is a planetary nebula that wasn't. It was correctly identified as a faint nebula by William Herschel, who discovered it on September 5, 1784. Because of its small size and the presence of a false central star, it was later misclassified as a planetary nebula. Only in recent decades has NGC 6857 returned to its rightful status as a nebula – an emission nebula, to be exact.

NGC 6857 is located in the heart of Cygnus at 20h 01m 48s right ascension and +33° 31' 38" declination. It's just 2 degrees SSE of the 4th magnitude star eta (η) Cygni, which was my starting point for a star-hop (see accompanying finder charts).

I observed NGC 6857 with a 10-inch f/5 reflector on an evening when the magnitude limit was around 5.0. I was unable to see it without the aid of OIII and narrowband filters. Even at 139X, it was small – appearing as a pale ghostly 'flame' emanating eastward from the vicinity of a 13th magnitude star.

NGC 6857 is part of a much larger but fainter emission nebula Sharpless 2-100. Approximately 30,000 light years away, its 40 arc-second apparent size translates to a true diameter of 9 light years.

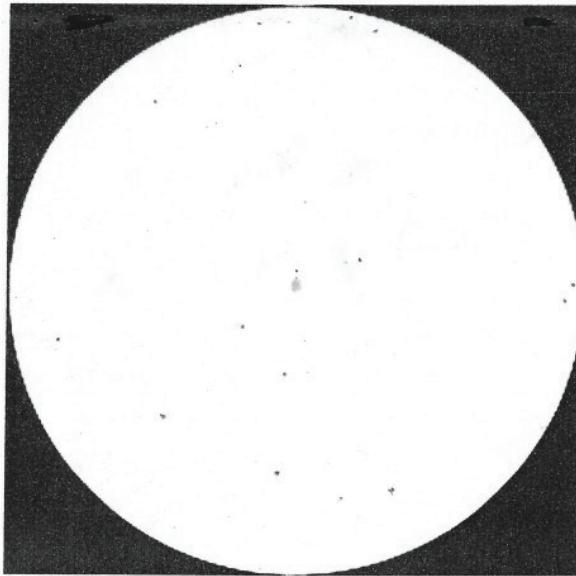
The purpose of the Observer's Challenge is to encourage the pursuit of visual observing. It is open to everyone who is interested. If you'd like to contribute notes, drawings, or photographs, we'll be happy to include them in our monthly summary. Submit your observing notes, sketches, and/or images to Roger Ivester (rogerivester@me.com). To find out more about the Observer's Challenge or access past reports, log on to rogerivester.com/category/observers-challenge-reports-complete.



OBSERVING LOG

NAME: Glenn Chaple
 DATE (M/D/Y) 9/07/2021 TIME: 10:30 EPT
 OBSERVING SITE: 82 S. Harbor Rd Townsend MA
 SKY CONDITIONS: Seeing (Antoniadi Scale) III Limiting Magnitude 5
 OBJECT: NGC 6857 TYPE: Emission Nebula CONSTELLATION: Cyg

SKETCH (note direction of west)



NOTES:

Small. Star of ~13th mag at west end of nebula. Not seen without filter. Viewed faintly with O-3 filter; better with narrowband nebula filter. Rich Milky Way field.
 Sketch of nebula from sketching

OBSERVING EQUIPMENT

Binoculars X
 Telescope: 10-inch f/5 reflector Eyepiece: 9mm Nagler
 Mag: 139X Field Diam: _____° Filter (if any): Orion Ultrablock Narrowband filter

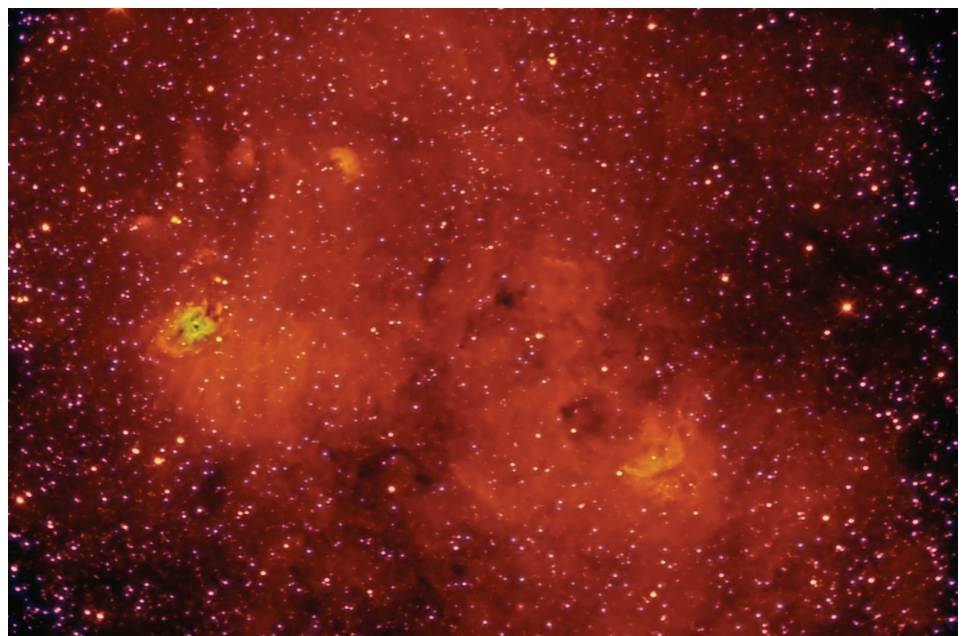
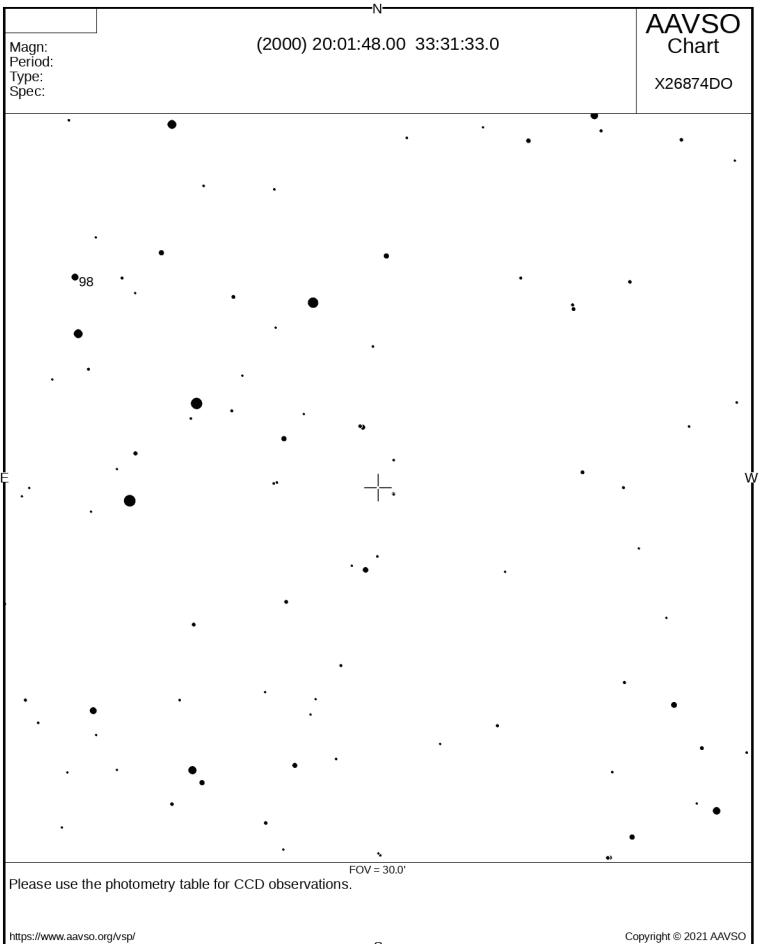
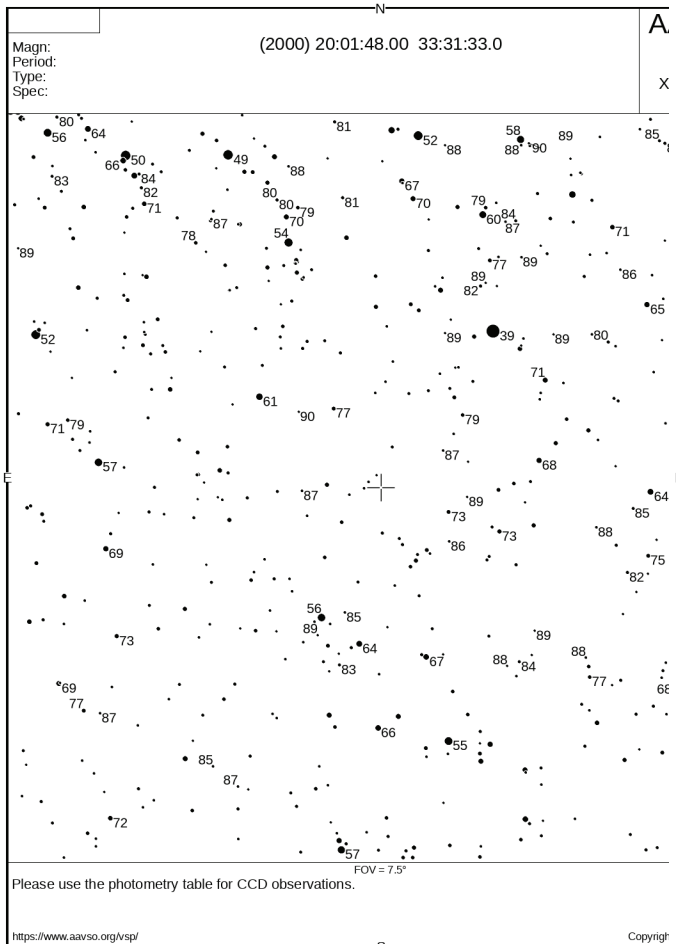


Image by Mario Motta, MD (ATMoB) Taken with 32 inch telescope, 3 hours, 1 hour each Ha, S2, O3 filters processed Pixinsight, touch up in Photoshop. NGC 6857 is the bright area at center left. North is up.



STARRY SCOOP

Editor: Kaitlynn Goulette



WHAT'S UP

This month features two meteor showers, the Draconids and the Orionids. The Draconids runs annually from October 6th to the 10th and peaks on the 7th. This shower is best viewed in the early evening and produces up to 10 meteors an hour. The second shower, the Orionids, runs annually from October 2nd to November 7th and peaks on the 21st and 22nd. This shower produces up to 20 meteors an hour, and is brought about by Earth traveling through the debris field of the famous Comet Halley. You can best observe this meteor shower from a dark place after midnight.

All month, shortly after sunset, Jupiter and Saturn can be found high in the southern sky in the constellation Capricornus. Both of these planets can be easily seen with the unaided eye, and will appear to be the brightest starlike objects in the South. When using binoculars, these points of light become disks and Jupiter's Galilean moons can be spotted. The moon will be joining Jupiter and Saturn to produce a nice display on the evenings of the 13th, 14th, and 15th.

Venus dominates our western early evening sky all month, and is only outshined by our sun and moon. On the 9th, the crescent moon is very close to Venus, with only 2 degrees of separation, creating a beautiful spectacle. On the 29th, Venus reaches its greatest eastern elongation, which is its highest point above the horizon.

Our October evenings welcome in the autumn constellations, including the recognizable asterism known as the Great Square of Pegasus. This pattern of stars is slightly tilted as it rises in our eastern sky, resembling a large baseball diamond and reminding us that baseball playoff season is just around the corner.

OCTOBER'S SKY

6: New Moon

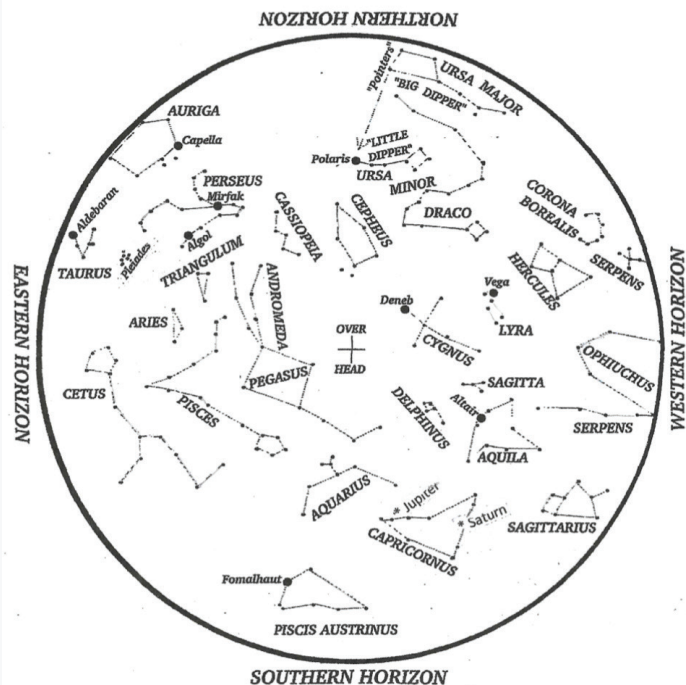
7: Draconid Meteor Shower

20: Full Moon

21-22: Orionid Meteor Shower

25: Mercury at Greatest Western Elongation

29: Venus at Greatest Eastern Elongation



Credit: Roger B. Culver

Hold star map above your head and align with compass points.

OBSERVATIONS

The highlight of my recent observations occurred under the dark skies of Cummington, MA, at the Arunah Hill Natural Science Center.

Throughout the day, I enjoyed hiking on the various nature trails, as well as viewing the sun through the many safely filtered telescopes that were set up. Numerous sunspots and solar prominences were visible.

After nightfall, I had the pleasure of making some high-power observations of Jupiter and Saturn through Dave Kelly's award-winning 4-inch, f/15 refracting telescope, along with Phil Rounseville's Newtonian telescope. Viewing the shadow of Io, one of the Galilean Moons, passing across the surface of Jupiter was surely one of the highlights of that evening.

The majority of my observations were made using my 12-inch Dobsonian telescope. I also invited others to share the view through the eyepiece, including our neighbors who made the trip to Arunah Hill to enjoy the dark night sky. My favorite part of star parties is the people, because it's lots of fun sharing my love of the night sky with other stargazers.



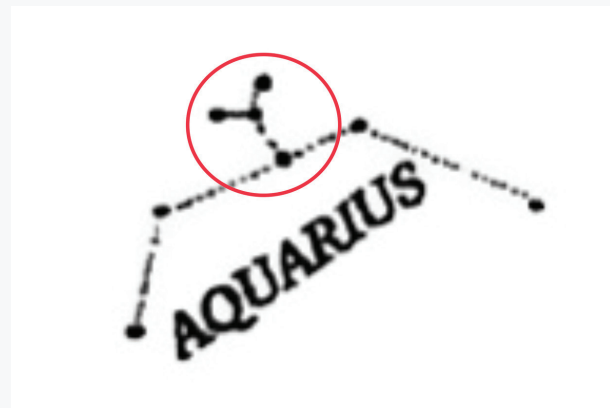
The purpose of the Starry Scoop is to communicate current astronomy and space events. If you want to share your observations or get digital copies of the Starry Scoop, contact starryscoop@gmail.com. The Starry Scoop is now on Facebook. Clear skies!

OBJECT OF THE MONTH

The featured object for the month of October is the Water Jar asterism found in the constellation Aquarius. Traditionally, this asterism is depicted as an upturned urn pouring water into the mouth of a fish. In dark skies, you can see a stream of faint stars running down from the Water Jar towards the bright star Fomalhaut, which is part of Pisces Austrinus, the Southern Fish.

This object consists of 4 stars in a y-shaped pattern, which are around 4th magnitude and span about 4 degrees in the sky. When viewing these with your unaided eye, allow time for your eyes to dark-adapt while staying away from bright lights. The asterism will fit nicely into the field of view of most binoculars, and for those using a telescope, be sure not to miss the fine double star on the western side of the star pattern.

You can find this asterism in the northern part of the constellation Aquarius. Use the star map below to help find it. Good luck and happy observing!



Water Jug Asterism

Directions to Seagrave Memorial Observatory

From the Providence area:

Take Rt. 6 West to Interstate 295 in Johnston and proceed west on Rt. 6 to Scituate. In Scituate bear right off Rt. 6 onto Rt. 101. Turn right onto Rt. 116 North. Peeptoad Road is the first left off Rt. 116.

From Coventry/West Warwick area:

Take Rt. 116 North. Peeptoad Road is the first left after crossing Rt. 101.

From Southern Rhode Island:

Take Interstate 95 North. Exit onto Interstate 295 North in Warwick (left exit.) Exit to Rt. 6 West in Johnston. Bear right off Rt. 6 onto Rt. 101. Turn right on Rt. 116. Peeptoad Road is the first left off Rt. 116.

From Northern Rhode Island:

Take Rt. 116 South. Follow Rt. 116 thru Greenville. Turn left at Knight's Farm intersection (Rt. 116 turns left) and follow Rt. 116. Watch for Peeptoad Road on the right.

From Connecticut:

- Take Rt. 44 East to Greenville and turn right on Rt. 116 South. Turn left at Knight's Farm intersection (Rt. 116 turn left) and follow Rt. 116. Watch for Peeptoad Road on the right.
- or • Take Rt. 6 East toward Rhode Island; bear left on Rt. 101 East and continue to intersection with Rt. 116. Turn left; Peeptoad Road is the first left off Rt. 116.

From Massachusetts:

Take Interstate 295 South (off Interstate 95 in Attleboro). Exit onto Rt. 6 West in Johnston. Bear right off Rt. 6 onto Rt. 101. Turn right on Rt. 116. Peeptoad Road is the first left off Rt. 116.



47 Peeptoad Road
North Scituate, Rhode Island 02857