



Southwest Florida Astronomical Society, Inc.
SWFAS – The Eyepiece

President’s Message

By Brian Risley

Hard to believe it is already June. With the summer months comes the majesty of the Summer Milky Way, Meteor Showers and also unfortunately, rain and mosquitoes.

Things are improving on the Covid front. Hopefully we will see more people at the meetings and at Star Parties again in the fall.

We will probably not have any club scheduled parties during the summer but do plan to start again as the weather improves. There may be some impromptu star parties down at Big Cypress or if someone wants to coordinate one at Seahawk Park, we can set that up.

June is the month we need to report membership to the Astronomical League. If you get an email from me about dues and have not paid, please respond to it, even if you are sending

in dues or are not staying with us, so we know what to expect. If you joined before September of last year and haven’t paid dues

for 2021, please consider renewing. We know it has been a tough year. If you have financial hardships, just let us know. We have plans to help anyone who is actively interested in being a member. If you have a question about whether you paid, please reply to the email and we will let you know what we show.

The Calusa Nature Center and Planetarium are open. There are daily planetarium shows using the new projection system.

We did a little work with the equipment, hopefully we will find some more time to get things



Photo By Phil Jansen

together and figure out what to do with the excess.

We are looking for topics for the upcoming meeting programs. If you have a presentation or know someone who could give a presentation that would be of interest to our club members, contact me or Mike McCauley.


Clear Skies,

Brian

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Upcoming Meetings/Events

In person at the Calusa Nature Center Planetarium or on Zoom
3450 Ortiz Ave, Fort Myers, FL 33905

June 3rd, 2021	Monthly Meeting Calusa Nature Ctr Planetarium	7:30pm
July 1st, 2021	Monthly Meeting Calusa Nature Ctr Planetarium	7:30pm
August 5th, 2021	Monthly Meeting Calusa Nature Ctr Planetarium	7:30pm
Sept 2nd, 2021	Monthly Meeting Calusa Nature Ctr Planetarium	7:30pm
October 7th, 2021	Monthly Meeting Calusa Nature Ctr Planetarium	7:30pm
Dec 2nd, 2021	Monthly Meeting Calusa Nature Ctr Planetarium	7:30pm

Zoom Meeting Info: (Thursday June 3rd, 7:30pm)

(Please don't login or test the link before 7:15 pm on Thursday)

If you have not been emailed the link, contact Brian or Tom.

Members who are familiar with Zoom may disregard instructions below.



For PC Users:

You'll want to install the "Zoom" app. on your computer, if you don't already have it. This way when you click on the link at the time of the meeting, it will take you directly to our meeting.

Download for (free) Zoom Client for Meetings:

<https://zoom.us/client/latest/ZoomInstaller.exe>

For Apple Users:

If you don't already have the "Zoom" app, you need to download it. After downloading, ignore all further instructions, and click to leave the app. (This app will automatically be used when you double click the link to the meeting on Thursday)

Here's the link to (free) Zoom in the App Store:

<https://apps.apple.com/us/app/zoom-cloud-meetings/id546505307>

General Instructions to join the meeting:

1. Click on the link above to join the meeting
2. Click on window that appears, "Join Zoom Meeting".
3. Then "Join Computer Audio"
4. On entering the meeting, audio is going to be "off" by default. Press down and hold your space bar to talk. Both Brian and the presenter will be unmuted by default. This is being done to cut down on background noise, as it seems to accumulate as our numbers increase.

For more information on audio and video go to:

<https://support.zoom.us/hc/en-us/articles/204484835-My-Audio-is-N>

Tom's Email: kleinto@netscape.net

Meeting Minutes

Minutes of the Southwest Florida Astronomical Society – May 6, 2021

The regular monthly business meeting of the Southwest Florida Astronomical Society, held in person and via Zoom conference, was called to order at 7:41 pm by president Brian Risley. There were 11 attendees present in person in the Planetarium, and 8 Zoom participants, for a total of 19. Brian reminded us that dues for 2021 are now due.

Brian again reminded everyone that he needs help producing the newsletter. Even if someone can only produce a section of it, that would be helpful.

Mike Jensen said he is willing to help with the website. Anyone interested should contact Mike or Brian.

Tony Heiner will oversee getting surplus scopes functional and determining a base value for sale to members or to the general public, or donating them. Brian discussed various pieces of surplus equipment. Members should let Brian know if interested in any of the surplus equipment.

The \$85 annual web hosting fee is due. Earl Hahn made a motion, seconded by Tony Heiner, to authorize paying the fee. The motion passed on a voice vote.

Brian reported the Astronomical League is seeking door prizes for the virtual AL Convention. Earl Hahn made a motion,

seconded by Tony Heiner, to donate \$250 from the Community Outreach Fund to the AL for door prizes. The motion passed on a voice vote.

Tony Heiner made a motion, seconded by Heather Preston, to approve the minutes of the April meeting as contained in the May Newsletter. The motion passed on a voice vote.

In the absence of the treasurer, Brian Risley presented the treasurer's report indicating an April closing balance of \$3159.44. Earl Hahn made a motion, seconded by Tony Heiner, to approve the report. The motion passed on a voice vote.

Some books were donated to the club library by Tim Barrier. Brian reported scopes are available for checkout.

Tom Segur reported a solar observing event in Charlotte County last Saturday was good except for the red tide toxins in the air. The Moore Observatory dome is not functioning properly. Tony Heiner will get with Tom to help determine the cause and develop a repair plan.

The business meeting adjourned at 8:10 pm.

The program was a planetarium show that the CNCP is evaluating for purchase. Members were encouraged to provide feedback to Heather Preston.

The meeting ended at 8:50pm.

Submitted by Don Palmer, secretary

Club Officers & Positions

President/Equipment Brian Risley swfaspres@gmail.com 239-464-0366	Treasurer/AL Coordinator John MacLean john.maclean@comcast.net 239-707-3365	Newsletter/Website Mike Jensen info@jensenone.com 913-304-0495	Club Historian Danny Secary asecary@gmail.com 239-470-4764
Vice President/Programs Mike McCauley mmccauley13@comcast.net 860-982-5022	Charlotte Event Coordinators Tony Heiner verahei@aol.com 941-457-9700 Thomas Segur tsegur479@comcast.net 941-249-8726	FSW Punta Gorda Moore Observatory Director Thomas Segur tsegur479@comcast.net 941-249-8726	Calusa Nature Center Planetarium Director Heather Preston heather@calusanature.org 239-275-3435
Secretary Don Palmer swfas.sec@gmail.com 239-334-3471	Viewing Coordinator Chuck Pavlick cpav4565@gmail.com 239-560-1516	Club Librarian Maria Berni 239-940-2935	Mailing Address SWFAS, Inc. PO Box 10127 Cape Coral FL 33910

★ Star Party Schedule

Sea Hawk Park - We are able to do club only events on short notice.

Caloosahatchee Regional Park -- Have not heard from people interested in having some club events there. Need to have some dates and an idea about how many are interested

Big Cypress Preserve — We are able to observe there on short notice. There is usually interest in going there on the dark weekends. If you are interested and are not part of the email group, contact me and I can get you added to the email group.

Recommended Reading & News Links

Members are encouraged to submit to [the editor](#) links to recommended articles and books that might be of interest to Club members.

Online Resources

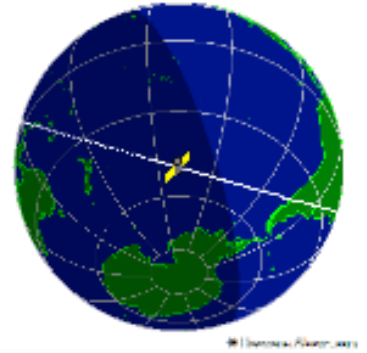
The Eyepiece Online - SWFAS's website. <http://www.theeyepiece.org/>

Heavens Above <https://www.heavens-above.com/>

Available both online and on Android App

Configurable for your specific location

Categories for Satellites, Astronomy (Sun, Moon, Planets, Comets, Asteroids, Constellations), Starlinks, Hubble, ISS



Time & Date <https://www.timeanddate.com/>

Create a customizable calendar including astronomical events

Sun/Moon Calculator, Moon Phases, Night Sky, Meteor Showers, Eclipses

Sky & Telescope <https://skyandtelescope.org/>

- News, Observing Articles, Observational Tools, Community Info/Star Parties & much more!

Stellarium Web <https://stellarium-web.org/>

An online planetarium running in your web browser

App available for all devices

Great tool for planning

Uncle Rod's Astro Blog <https://uncle-rods.blogspot.com/>

NASA/JPL <https://www.jpl.nasa.gov/>

Night Sky Simulations <https://www.timeanddate.com/astronomy/night/>

Books

Each Weekly Newsletter of S&T has a 60-second news section. The general link for S&T Astronomy News is

<https://www.skyandtelescope.com/astronomy-news/>

S&T Astronomy News is Astronomy Magazine & News <https://www.astronomy.com/news>

Stargazing: Getting Started

Sky and Telescope has a new free introductory E-book “Stargazing: Getting Started” if you sign up with your email.

<https://skyandtelescope.com>

The 400-Year Rhythm of Great Conjunctions

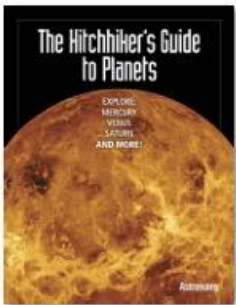
By Steffen Thorsen and Graham Jones, Sky & Telescope Weekly, December 18, 2020

Sky Highlights for 2021

by Bob King, Sky & Telescope, pages 48-50, January 2021. [Includes an inset on 2021 Returning Comets].

A Martian Roundtrip: NASA’s Perseverance Rover Sample Tubes

JPL-News Weekly, December 23, 2020, article dated December 21, 2020. <https://www.jpl.nasa.gov/news>



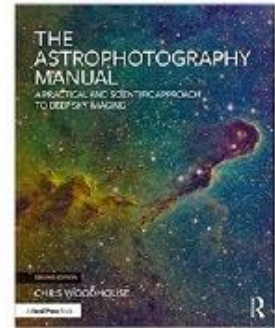
The Hitchhiker’s Guide to the Planets

Astronomy magazine has a free PDF download of “The Hitchhiker’s Guide to the Planets”, published September 19, 2019. <https://astronomy.com/rapid/2019/09/the-hitchhikers-guide-to-planets>

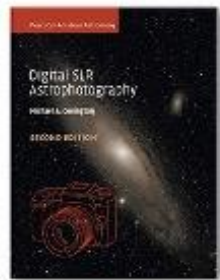
Astrophotography Books & Resources

The Astrophotography Manual: A Practical and Scientific Approach to Deep Sky Imaging

The Astrophotography Manual, Second Edition is for photographers ready to move beyond standard SLR cameras and editing software to create beautiful images of nebulas, galaxies, clusters, and the stars. Beginning with a brief astronomy primer, this book takes readers through the full astrophotography process, from choosing and using equipment to image capture, calibration, and processing.



[Click here to buy on Amazon.com](#)



Digital SLR Astrophotography (Practical Amateur Astronomy) 2nd Edition

Digital SLR cameras have made it easier than ever before to photograph the night sky. Whether you’re a beginner, nature photographer, or serious astronomer, this is the definitive handbook to capturing the heavens. Starting with simple projects for beginners such as cameras on tripods, it then moves onto more advanced projects including telescope photography and methods of astronomical research. With 80% revised and updated material. [Click here to buy on Amazon.com](#)

In The Sky

A review of the important times, dates and positions.

June 2021 rise & set times of the Sun, Moon & Planets.

All calculated for local time at the Calusa Nature Center and Planetarium in Ft. Myers, Fl. (26.6771°North, 81.8160°West)

Sunrise/Sunset Data

Sunrise: June 1st 6:34 am (64.64°ENE). Sunset: 8:16 pm (295.46°WNW)

Sunrise: June 30th 6:37 am (63.44°ENE). Sunset: 8:24 pm (296.50°WNW)

Moon Phases Per Month for 2021

New Moon		First Quarter		Full Moon		Third Quarter	
						Jan 6	04:37
Jan 13	00:00	Jan 20	16:01	Jan 28	14:16	Feb 4	12:37
Feb 11	14:05	Feb 19	13:47	Feb 27	03:17	Mar 5	20:30
Mar 13	05:21	Mar 21	10:40	Mar 28	14:48	Apr 4	06:02
Apr 11	22:30	Apr 20	02:58	Apr 26	23:31	May 3	15:50
May 11	14:59	May 19	15:12	May 26	07:13	Jun 2	03:24
Jun 10	06:52	Jun 17	23:54	Jun 24	14:39	Jul 1	17:10
Jul 9	21:16	Jul 17	06:10	Jul 23	22:36	Jul 31	09:15
Aug 8	09:50	Aug 15	11:19	Aug 22	08:01	Aug 30	03:13
Sep 6	20:51	Sep 13	16:39	Sep 20	19:54	Sep 28	21:57
Oct 6	07:05	Oct 12	23:25	Oct 20	10:56	Oct 28	16:05
Nov 4	17:14	Nov 11	07:45	Nov 19	03:57	Nov 27	07:27
Dec 4	02:43	Dec 10	20:35	Dec 18	23:35	Dec 26	21:23

Planet Visibility For June 2021

For precise times/locations, go to <https://www.timeanddate.com/astronomy/night/>

Planetrise/Planetset, Tue, Jun 1, 2021				
Planet	Rise	Set	Meridian	Comment
Mercury	Tue 7:31 am	Tue 9:11 pm	Tue 2:21 pm	Extremely difficult to see
Venus	Tue 7:46 am	Tue 9:37 pm	Tue 2:41 pm	Fairly good visibility
Mars	Tue 9:39 am	Tue 11:20 pm	Tue 4:30 pm	Average visibility
Jupiter	Wed 1:21 am	Wed 12:37 pm	Wed 6:59 am	Perfect visibility
Saturn	Wed 12:22 am	Wed 11:13 am	Wed 5:47 am	Perfect visibility
Uranus	Tue 4:54 am	Tue 5:59 pm	Tue 11:27 am	Very difficult to see
Neptune	Wed 2:25 am	Wed 2:13 pm	Wed 8:19 am	Very difficult to see

Link for ISS Passes - <https://www.heavens-above.com/PassSummary.aspx?satid=25544&lat=0&lng=0&loc=Unspecified&alt=0&tz=UCT>

Link for Hubble Passes - <https://www.heavens-above.com/PassSummary.aspx?satid=20580&lat=0&lng=0&loc=Unspecified&alt=0&tz=UCT>



Markarian's Chain Area, annotated and tracked by Linwood Ferguson. View Linwood's images at:

<https://www.captivephotons.com/Photography/Astrophotography/>

Join Our New Astrophotography Special Interest Group (SIG)

By Mike Jensen – Astrophotography SIG Lead

Astronomy & Astrophotography became HUGE during the Covid pandemic (until all the distributors ran out of telescopes and mounts). The interest to image and learn is so great that we at SWFAS have decided to start an Astrophotography Special Interest Group (SIG).

If you are interested in joining, or learning more about it, please contact Mike Jensen by emailing him at info@jensenone.com

As soon as we have had a chance to get the word out, we will schedule a meeting to talk about the interest areas for the group, potential meeting times, imaging opportunities, show & tell and much, much more!



Photo By Mike Jensen
M51 taken with a Sony A7Riii at 600mm. About 55 images stacked in APP



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!

Astrophotography With Your Smartphone - David Prosper



Have you ever wanted to take night time photos like you've seen online, with the Milky Way stretched across the sky, a blood-red Moon during a total eclipse, or a colorful nebula? Many astrophotos take hours of time, expensive equipment, and travel, which can intimidate beginners to astrophotography. However, anyone with a camera can take astrophotos; even if you have a just smartphone, you can do astrophotography. Seriously!

Don't expect Hubble-level images starting out! However, you can take surprisingly impressive shots by practicing several basic techniques: steadiness, locked focus, long exposure, and processing. First, steady your smartphone to keep your subjects sharp. This is especially important in low light conditions. A small tripod is ideal, but an improvised stand, like a rock or block of wood, works in a pinch. Most camera apps offer timer options to delay taking a photo by a few seconds, which reduces the vibration of your fingers when taking a shot. Next, lock your focus. Smartphones use autofocus, which is not ideal for low-light photos, especially if the camera readjusts focus mid-session. Tap the phone's screen to focus on a distant bright star or streetlight, then check for options to fine-tune and lock it. Adjusting your camera's exposure time is also essential. The longer your camera is open, the more light it gathers - essential for low-light astrophotography. Start by setting your exposure time to a few seconds. With those options set, take a test photo of your target! If your phone's camera app doesn't offer these options, you can download apps that do. While some phones offer an "astrophotography" setting, this is still rare as of 2021. Finally, process your photos using an app on your phone or computer to bring out additional detail! Post-processing is the secret of all astrophotography.



You now have your own first astrophotos! Wondering what you can do next? Practice: take lots of photos using different settings, especially before deciding on any equipment upgrades. Luckily, there are many amazing resources for budding astrophotographers. NASA has a free eBook with extensive tips for smartphone astrophotography at bit.ly/smartastrophoto, and you can also join the Smartphone Astrophotography project at bit.ly/smartphoneastroproject. Members of astronomy clubs often offer tips or even lessons on astrophotography; you can find a club near you by searching the "Clubs and Events" map on the Night Sky Network's website at nightsky.jpl.nasa.gov. May you have clear skies!

A small tripod for a smartphone. They are relatively inexpensive – the author found this at a local dollar store!

The Moon is large and bright, making it a great target for beginners. The author took both of these photos using an iPhone 6s. The crescent moon at sunset (left) was taken with a phone propped on the roof rack of a car; the closeup shot of lunar craters (right) was taken through the eyepiece of a friend's Celestron C8 telescope.

Messier Objects For June 2021

<https://www.messier.seds.org/xtra/12months/m-june.html>

Unlike his contemporary and earlier colleagues, Charles Messier was such a careful observer that all objects in his catalog actually exist and could be identified with real celestial objects. However, he was not always an error-free recorder and data-reducer, making some few mistakes which have hidden 4 objects for more than a century, so that they were missed. The missing objects are M47, M48, M91, and M102. Also, as a fifth (more or less) “missing” object, the double star M40, measured accurately by Messier, was only identified in 1966.

M40 was accurately measured and described by Messier. Nevertheless, observers since William Herschel were unable to identify this pair. Only in 1966, John Mallas found that it is identical to the double star Winnecke 4 (Mallas 1966).

M47 was missed because Messier did a sign error during the reduction of positional data. As Messier states, he computed the position of this cluster from the differences to the star 2 Puppis (2 Navis in Messier’s time), but mistook the sign of the right ascension difference. This fact was recognized by T.F. Morris of the Royal Astronomical Society of Canada (RASC) in 1959 (Morris 1959). Previously, John Herschel had given the wrong position a number in his General Catalogue, GC 1594, and following him, J.L.E. Dreyer a NGC number, NGC 2478, although at that position there’s no object at all.

M48 was first identified with NGC 2548, without any further discussion, by Oswald Thomas in his 1934 book *Astronomie* (Thomas 1934). This case is not so obvious as M47, but as (the same astronomer) T.F. Morris pointed out in 1959 (Morris 1959), the only object matching Messier’s description in this celestial area is NGC 2548, which is now generally recognized as M48. This cluster lies at the same right ascension, but about 2.5 degrees south of Messier’s position. The reasons for this error will probably remain obscure unless Messier’s lost observing books of this period should come to light one day. A look at that position in a chart of Messier’s time reveals that this may well be a “charting” or “grid” error: Messier’s position is about the same distance south of the northern-next declination line, as the cluster is from the southern-next. Unidentified, M48 (NGC 2548) had been independently rediscovered by Johann Elert Bode before 1782, and by Caroline Herschel in 1783.



Messier Object 42 – The Great Orion Nebula
Image by Linwood Ferguson
Shot using an NP 101 at 540mm,
this is Ha 38x100sec, 2x300sec, Sii 30x100sec,
3x300sec, Oii 28x100sec, 5x300sec, combined with an
HSO pallet. Other images at
<https://www.captivephotons.com/>

M91 was much more difficult to reconstruct; finally, Messier had measured the position of this galaxy from the previously discovered M89, but thought he had used M58, as the amateur astronomer William C. Williams of Fort Worth, Texas had found out and thus identified M91 with NGC 4548, now generally accepted and quite safe (Williams 1969). Previously, it had been assumed that M91 might be the 12 mag galaxy NGC 4571, the nearest to Messier’s position - unlikely but not totally impossible. Many sources also held the version that it was actually a comet that fooled Messier - even more unlikely with regard to the fact that Messier was the comet specialist of his time, and Owen Gingerich had brought up the hypothesis that it might be a duplicate observation of M58.

M102 finally could not be cleared up with certainty up to now. At last, there are still two possibilities open: It may be a duplication of M101, as its discoverer Pierre Méchain believed when he wrote a letter to Bernoulli in Germany two years later, on May 6, 1783, but on the other hand, its description in Messier’s catalog (which was actually Méchain’s description) matches well with NGC 5866. Moreover, it may be that Charles Messier has observed this object when measuring the position of M102 which he wrote by hand into his personal copy of the catalog, but did a data reduction error again, plotting it exactly 5 degrees west (preceding) of its true position in right ascension (at its latitude, an angular distance of about 3 deg). The present author has discussed this topic and thinks it depends on taste to believe which was erroneous: the observation or the

letter, or if Messier's possible (or probable?) observation justifies the designation "M102" for this object.

To summarize: M40 was simply not correctly identified by observers after Messier for about 200 years, despite its correct description and position. The other four missing Messier objects were probably missed because of errata of

Astronomical League Info

The Astronomical League

As a member of the Southwest Florida Astronomical Society you are automatically also a member of the Astronomical League, a nationwide affiliation of astronomy clubs. Membership in the AL provides a number of benefits for you including receipt of *The Reflector*, the AL's quarterly newsletter, use of the Book Service, through which you can buy astronomy related books at a 10% discount. **You can also participate in the Astronomical League's Observing Clubs.** The Observing Clubs offer encouragement and certificates of accomplishment for demonstrating observing skills with a variety of instruments and objects. These include the Messier Club, Binocular Messier Club, the Herschel 400 Club, the Deep Sky Binocular Club, and many others. To learn more about the Astronomical League and its benefits for you, visit <http://www.astroleague.org>

Astronomical League News

The Astronomical League will be hosting the **Virtual ALCON 21 event from August 19 – 21, 2021** – see [Home | ALCON Virtual](#) The event will have special door prizes and SWFAS Members voted to donate \$250 from our Community Outreach Fund to sponsor a door prize at our May monthly meeting. The Astronomical League is highly appreciative.

June 2021 Observing Program Article (This is a monthly highlight of one of the Astronomical League's Observing programs prepared by the SWFAS ALCor.)
Monthly highlight of the Astronomical League Observing Programs

The Astronomical League Urban Observing Program
Over the last two months we highlighted the Messier and Caldwell List Observing programs which cover some of the
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Messier in data reduction, in detail one sign error (for M47), one mistaken comparison object (for M91) and one or, probably, two "grid" errors, i.e. the declination of M48 was perhaps wrongly determined within the coordinate grid, while the RA of M102 is almost exactly 5 degrees off, which is the grid tick width in the charts he used (see e.g. this example) and can thus be explained by wrong looks or labels.



Image by Linwood Ferguson
Other images at <https://www.captivephotons.com/>

best objects available for amateurs to observe in the night sky. These programs include many targets requiring darker skies.

This month we'll discuss the Urban Observing Program which is specifically designed to offer a challenge to observe 100 objects in light polluted skies. To gain the award, all observations must be made from light polluted sites and observations made from dark sky sites are not allowed! The definition of a light polluted sky is one from which the Milky Way is not visible to the naked eye. This corresponds to a Bortle Scale of 5 or higher on the cleardarksky chart.

Urban Observing Program

Two lists are provided. The first includes 87 dark sky objects including Open Clusters, Globular Clusters, Planetary Nebulas, and Galaxies. Forty-one of these objects are on the Messier List. All objects are listed in Right Ascension order so that you can view them as they rise in the East and set in the West.

Information provided on each deep-sky object includes: Catalog Number, Right Ascension, Declination, Magnitude, Messier Designation (if any), Type of Object, Size, Constellation, and what chart it is located on in both the Uranometria or Sky Atlas 2000. The second list includes 12 Double Stars and the variable star Algol. Observations and magnitude estimates of Algol are required both at a minimum and any non-minimum night. The recommended minimum size scope aperture is 6 inches. Scopes between 6 and 10 inches aperture were used to validate the lists.

Included on the website for this program is a useful and detailed set of Tips for Observing in a Light Polluted area. This covers optimum times (following store closures, etc.), sky and weather conditions, tips for shielding stray light, filters, and so forth. Setting circles are permitted although star-hopping with finders and Telrads is the preferred method for locating objects.



May was a busy month for the International Dark Sky Places program! We announced the [Appalachian Mountain Club's Maine Woods](#) property's designation as an International Dark Sky Park—the first designation of this kind in the New England region of the United States. On top of that,



the town of [Crestone](#), Colorado, in the United States was designated as an International Dark Sky Community. Also, [Prineville Reservoir State Park](#) was named the first International Dark Sky Park in Oregon, United States, and [Julian](#), California, United States, was named an International Dark Sky Community.

Over the last few years, our Fixture Seal of Approval program has made significant progress and added products from companies around the globe. So this month, we shared a [program update](#).

Then, in a guest post on the IDA blog, Ken Walczak, Senior Manager for Far Horizons at Adler Planetarium in Chicago, Illinois, United States, provided some valuable insight into the explosive growth of the commercial greenhouse industry and its impact on light pollution.

In addition, in our May advocate feature, we highlighted the work of [Georgia MacMillan](#) from Ireland. From organizing Mayo International Dark Sky Week and hosting nighttime wilderness hikes to her instrumental work on International Dark Sky Places in Ireland, she is a force in the dark sky community.

In case you missed it, the spring 2021 issue of Nightscape is out now. You can [download a copy here](#).

Editor's Note: Please send me your photos to be included in the newsletter. Also send interesting articles you've read that you feel may be of interest to others.

Send to Mike Jensen at info@jensenon.com