



Sedona, Arizona

Keep Sedona Beautiful Dark-Sky Committee

## **2018 Annual Report**

To the International Dark-Sky Association

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The Keep Sedona Beautiful (KSB) Dark-Sky Committee is pleased to report progress in 2018 toward its goal of bringing more community awareness of light pollution and preserving our magnificent natural resource—our dark night sky. This was accomplished through the Committee’s dark-sky outreach program, which included educational events and assisting other communities in pursuing the International Dark-Sky Community designation.

## EDUCATIONAL EVENTS

### **January 31, 2018: Total Lunar Eclipse at Cultural Park PI at Upper Red Rock Loop Road**

The Sirius Lookers Astro Club, Sedona Public Library, and Keep Sedona Beautiful Dark-Sky Committee hosted the Total Lunar Eclipse. The viewing of the Total Eclipse was enhanced with telescopes and binoculars. The celestial event was highlighted by being next to bright BeeHive star cluster. Saturn, Mars, and Jupiter were in the opposite part of the sky during the event. Many people attended this event.



Photo by Dennis Young



Photo by J.D. Maddy

**April 21, 2018: Earth Day Celebration at Red Rock State Park**

Keep Sedona Beautiful Dark-Sky Committee joined Red Rock State Park to celebrate Earth Day. Dark-sky information was distributed, plus information on dark-sky compliant outdoor light fixtures.



Dreamstime Photo

**April 22, 2018: National Astronomy Day, Star Party**

The Sirius Lookers Astro Club, Sedona Public Library, and Keep Sedona Beautiful Dark-Sky Committee sponsored the National Astronomy Day in the Safeway parking lot in West Sedona. The event started with (SAFE) solar viewing of our closet star the "Sun" followed by night time star gazing. The highlights were the crescent Moon, the Seven Sisters Star cluster, and Venus. Binoculars and giant telescopes were available for enhanced viewing.



Dreamstime Photo

**April 29, 2018: Moon Light Hike at Red Rock State Park**

J. D. Maddy, President of Astronomers of Verde Valley, and Karen Maddy hosted a moon light hike at Red Rock State Park. The group of attendees enjoyed hiking under the light of the moon. After, the hikers looked through the telescopes set up for a view of the Moon, clusters, double stars and other celestial objects.



Dreamstime Photo

**June 2, 2018: Star Party at Red Rock State Park**

Red Rock State Park hosted a star party, which was sponsored by Keep Sedona Beautiful. The Astronomers of Verde Valley (AVV) had their telescopes ready for attendees to view the heavens. J.D. Maddy of AVV gave an interesting astronomy presentation, followed by telescope viewing of galaxies and the galaxy-rich constellations of Leo and Virgo. Under the dark skies of the Park, the summer Milky Way was starting to make its way across the night sky. Jupiter was high in the sky as it goes through the constellation of Libra. Venus was glimpsed low on the western horizon as it hovered in the constellation of Gemini. The Keep Sedona Beautiful Dark-Sky Committee distributed dark-sky literature and talk with the attendees about light pollution, dark-sky compliant lighting fixtures, the importance of keeping our night skies dark, and advised the attendees which communities in Arizona are International Dark-Sky Communities (IDSC), and what it means to be an IDSC.





Dreamstime Photo

### **July 8, 2018: Dark-Sky Lecture at Red Rock State Park - Why Do Dark Skies Matter?**

Red Rock State Park hosted Dr. Matt Goodwin for his lecture, "Why Do Dark Skies Matter?" Dr. Goodwin is senior lecturer at Northern Arizona University's Department of Philosophy, an Arizona Humanities Road Scholar, and co-founder of Sedona Philosophy.

### **Sirius Lookers Club, Sedona Library**

Weather permitting, a star gazing event follows the monthly meetings of the Sirius Lookers Club. Dennis Young, President of Sirius Lookers Club, has his telescope ready to show the attendees the beauty of the dark night sky.



Photo by Dreamstime

### **August 4, 2018: Sedona Star Party**

The Sedona Chamber of Commerce, the City of Sedona Parks and Recreation Department, the Astronomers of Verde Valley, and Keep Sedona Beautiful (KSB) together hosted an evening Star Party at the Posse Ground Park. Over 400 people attended the event.

J.D. Maddy of AVV gave an interesting astronomy presentation. As the last of the Winter constellations dip into the western horizon, the rich stream of stars in the Summer Milky Way rose high in the sky. Constellations were visible in the many telescopes that were set up for everyone to view as well as Jupiter, Saturn and Mars.

The KSB Dark-Sky Committee talked with the visitors about light pollution, dark-sky compliant fixtures, and the importance of keeping our night sky dark. Dark-sky brochures were also distributed.





### **September 7, 2018: Star Party at Tuzigoot National Monument**

The National Park Service and the Astronomers of Verde Valley hosted a star party at Tuzigoot National Monument to explore the skies. The star party began with a presentation by Sebra Choe, Camp Verde Economic Development Specialist. Camp Verde recently was designated as the 20<sup>th</sup> International Dark-Sky Community. Ms. Choe spoke about the process of getting the designation and why dark skies matter. Joanne Kendrick, Chair of the Keep Sedona Beautiful Dark-Sky Committee also spoke about her involvement in the dark-sky effort around the Greater Sedona Area. Ms. Kendrick also spoke about the effects of light pollution; how we can reduce light pollution; and the benefits of a nighttime environment. After the presentations, the attendees looked through the astronomers' telescopes for views of the planets and other celestial objects.

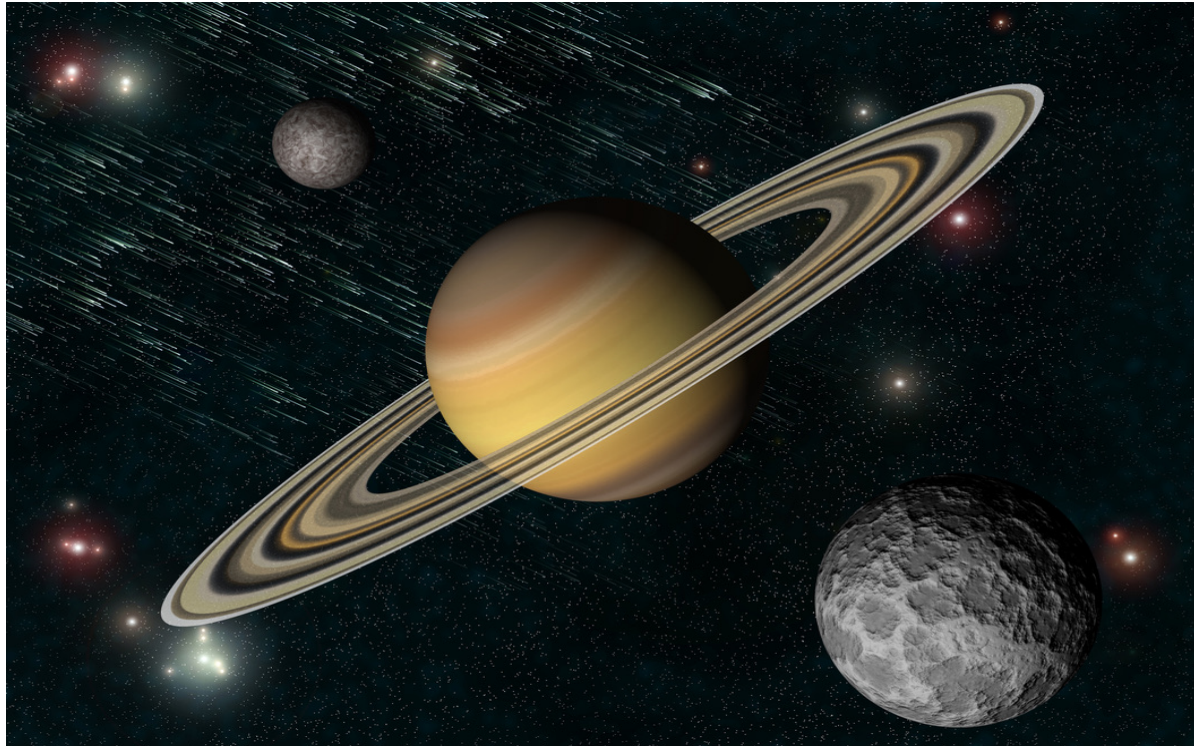
### **September 8, 2018: Star Party at Red Rock State Park**

Red Rock State Park hosted a star party that was sponsored by Keep Sedona Beautiful (KSB). The Astronomers of Verde Valley (AVV) had their telescopes ready for visitors to view the heavens.

The planets of Mars, Jupiter and Saturn sailed high in the sky in the stream of stars in the Milky Way. The dark skies of Red Rock State Park allowed visitors to easily see this stream



of stars and dark dust lanes with the unaided eye. Through the astronomers' telescopes, the Milky Way came alive with nebulae, open star clusters, and much more. The KSB Dark-Sky Committee distributed dark-sky brochures and talked with the visitors about light pollution, dark-sky compliant fixtures, and the importance of keeping our night sky dark.



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**September 12, 2018: Local Professional Astronomy Presentation to Sedona Women, "The Sedona Women's Guide to the Galaxy"**

Dennis Young, an internationally known astronomer and local expert, gave a presentation to Sedona Women, "The Sedona Women's Guide to the Galaxy", which began with his Astro-Scenic Photography. Dennis shared his knowledge and insights on how to navigate the celestial sky through the eyes of a young child...Astronomy 101.

**September 12, 2018: Keep Sedona Beautiful Preserving the Wonder Speakers Series, Photographer Ted Grussing**

Ted Grussing was Keep Sedona Beautiful's Preserving the Wonder speaker in September. Mr. Grussing shared his amazing photographs of our natural environment, which included the beauty of our dark skies.

**With our beautiful preserved dark skies, multiple companies offer private and group star parties to visitors worldwide.**

**SUPPORT OF INTERNATIONAL  
DARK-SKY COMMUNITY DESIGNATIONS**

The KSB Dark-Sky Committee is assisting Cottonwood, AZ as they pursue the International Dark-Sky Community designation.



## **DARK-SKY BROCHURES**

The Keep Sedona Beautiful Dark-Sky Committee distributes its Dark-Sky Brochures at educational events as well as to residents, business, and visitors.

## **KEEP SEDONA BEAUTIFUL WEBSITE**

The Dark-Sky tab at KSB'S website, [www.KeepSedonaBeautiful.org](http://www.KeepSedonaBeautiful.org), is kept updated about dark-sky events. The Dark-Sky Tab includes annual community dark-sky awareness events. It links to the International Dark-Sky Association (IDA) Video, "Losing the Dark," as well as to the following:

- IDA Website
- IDA Quick Link to Lights at Night Turn Pollinators Off
- IDA Quick Link to My Neighbor's Lighting
- IDA Quick Links to Light Pollution, Wildlife, Energy Waste, Human Health, and More
- IDA Quick Link to Small Changes, Big Impact-Dark Sky Lighting at Home Depot
- IDA Quick Link to International Dark-Sky Places
- City of Sedona Outdoor Lighting Ordinance 2001

## **NEW AND REMODELED BUSINESSES IN SEDONA**

The following new buildings in Sedona were completed and received their Final Certificates of Occupancy (CofO) in 2018:

- New Warehouse, 60 Sinagua Drive

Part of the City's inspection process includes a lighting night-time inspection. Issuance of a final CofO is evidence that all inspections, including a lighting inspection, were passed.

The following remodels in Sedona were completed in 2018. Please note this is not a comprehensive list, but only includes projects that involved new lighting.

- Sedona Motel, south of the Y, north of Tlaquepaque
- Sedona Grand View Apartments, 150 Sombart Lane

If the remodeling project includes new lighting, part of the inspection process is a night-time lighting inspection. Final sign off on the permit is evidence that all inspections, including a lighting inspection for all new lighting, were passed.

## **SKY QUALITY MEASUREMENTS**

The KSB Dark-Sky Committee takes Sky Quality Measurements to ensure that Sedona continues to protect its dark night skies and to reduce light pollution. The measurements were taken in three locations on May 15, 2018 and June 13, 2018. The readings were taken at the same locations as in previous years. Below are the measurements:



SKY QUALITY READING IN SEDONA CITY LIMITS PERFORMED ON May 15, 2018, NEW MOON									
Time	Location	Percent of Cloud Cover	First Sky Quality Reading	Second Sky Quality Reading	Third Sky Quality Reading	Fourth Sky Quality Reading	Fifth Sky Quality Reading	Sixth Sky Quality Reading	Average Sky Quality Reading
21:20	Saddle Rock Cir and June Bug Cir)	0%	21.04	21.00	20.99	20.99	20.99	21.07	21.01
21:12	Whitetail Rd and Rodeo Ln	0%	21.02	21.00	20.99	20.98	20.96	20.96	20.99
21:27	Keep Sedona Beautiful	0%	21.24	21.17	21.18	21.19	21.14	21.16	21.18

SKY QUALITY READING IN SEDONA CITY LIMITS PERFORMED ON JUNE 13, 2018, NEW MOON									
Time	Location	Percent of Cloud Cover	First Sky Quality Reading	Second Sky Quality Reading	Third Sky Quality Reading	Fourth Sky Quality Reading	Fifth Sky Quality Reading	Sixth Sky Quality Reading	Average Sky Quality Reading
21:05	Saddle Rock Cir and June Bug Cir)	0%	20.70	20.70	20.72	20.71	20.71	20.72	20.71
21:10	Whitetail Rd and Rodeo Ln	0%	20.85	20.84	20.83	20.83	20.83	20.84	20.84
20:55	Keep Sedona Beautiful	0%	20.42	20.41	20.42	20.41	20.41	20.45	20.42

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Report submitted by Joanne Kendrick, Chair  
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