



Oracle State Park Center for Environmental Education

International Dark Sky Park (Silver Tier) 2017 Annual Report



Prepared by the Oracle Dark Skies Committee (ODSC)

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1. Letter of Submittal

IDA Board of Directors
International Dark-Sky Association
3225 North First Avenue
Tucson, AZ 85719-2103

Dear IDA Board of Directors,

It is with great pride as the new Park Manager that I submit to you my letter of support for the second annual report for Oracle State Park, Arizona's First International Dark Sky Park.

From its inaugural IDSP designation in 2014 Oracle State Park has become known as the Park for Dark Sky Viewing. The current year of 2017 is no exception as numerous Dark Sky events occur year round at Oracle State Park most are titled in the name of Star Party. Dark Sky viewing accompanies most evening events, programs and activities that occur at Oracle State Park with a Star Party.

A Star Party that occurs at Oracle State Park is an event that highlights the importance of night sky awareness. This has been done through guest speakers talking about this subject and through volunteers from local affiliated organizations that make their telescopes available for park visitors free of charge to further enjoy the Dark Sky.

We appreciate the continued support from IDA as we look to provide more night sky events, which in turn showcase our Dark Sky as well as our beautiful 4,000 acre park and wildlife refuge. I look forward to our collaboration of providing Dark Skies for all our park visitors, now and far into the future!

Best,

/signed/

Vince Micallef, Manager

Oracle State Park

Arizona Parks and Trails



2. General

2.1 Brief History of Oracle State Park Center for Environmental Education

The Kannally Ranch was donated to The Defenders of Wildlife (DOW), a non-profit organization, in 1976. The will of Lucille Kannally gave the 4000-acre ranch to DOW with the stipulation that the property be perpetually used as a wildlife reserve. The DOW held this property (called the Oracle Wildlife Refuge) for ten years. In 1985, the DOW decided to offer the property to the State for a State Park.

The Park was continually available for environmental education programs on a reservation basis. Oracle State Park was officially dedicated and opened to the public October 1, 2001.

The above history is from the book *Arizona State Parks: The Beginning* edited by Charles R. Eatherly, and used with permission. Copyright Arizona State Parks.

The Park received the IDA “International Dark Sky Park” (IDSP) Silver Tier designation in October 2014.



International Dark-Sky Association

"...to preserve and protect the nighttime environment and our heritage of dark skies through environmentally responsible outdoor lighting."

3223 North First Avenue, Tucson, AZ 85719, USA
tel +1.520.293.3198 | fax +1.520.293.3192
www.darksky.org | ida@darksky.org

13 October 2014

**Interim Executive
Director**

W. Scott Kardel

Emeritus

David L. Crawford, Ph.D.

Mr. Bryan Martyn, Executive Director
Arizona State Parks
1300 W. Washington Street
Phoenix, AZ 85007

Dear Mr. Martyn:

On behalf of the IDA Board of Directors, it is with great pleasure that I write to inform you that the Board has approved the nomination of Oracle State Park to become the world's twentieth IDA International Dark Sky Park.

The Board is impressed by the efforts undertaken at OSP to preserve the natural nighttime environment there for the benefit of future generations of Arizonans, and we hope that the IDA designation will help spread the word about the Park and its activities so that Park visitors from all over may enjoy an authentic dark-skies experience for themselves.

We look forward to a long and productive collaboration with Arizona State Parks to protect dark skies both at Oracle and other properties in your system.

Kind regards,

Jim Dougherty, President
IDA Board of Directors

cc: Mr. Steve Haas (Manager, Oracle State Park)
Mr. Michael Weasner (Oracle Dark Skies Committee)

Board of Directors

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Scott Roberts • USA

Leo Smith • USA

IDA Offices

Hever, Belgium | Turrumurra, New South Wales, Australia

2.2 New Park Manager, Increased Staff, Expanded Operations

In March 2017, a full-time manager was hired for Oracle State Park (see Section 9.2). Previously the manager was a shared position with Catalina State Park. An additional full-time Ranger position was added in 2017. Both of these positions were added to support the Park being opened 7 days a week in 2017 instead of just on weekends.

2.3 IDA Contacts

Vince Micallef, Manager, Oracle State Park, vmicallef@azstateparks.gov

Mike Weasner, Chair, Oracle Dark Skies Committee, mweasner@mac.com

2.4 Tier Status Upgrade Plans

Since receiving the “International Dark Sky Park” designation, Oracle State Park and the Oracle Dark Skies Committee have been working to raise awareness of the issue of Light Pollution using a “Go for the Gold” public outreach approach. The hope is that over time, the current Silver Tier sky can achieve Gold level. When it does, a Tier Status Upgrade will be submitted.

2.5 Park Visitors During Past Year

From October 2016 through September 2017, Oracle State Park had 9850 visitors attend events of various types, a significant increase from the previous year. Poor weather impacted attendance at some dark sky related events (e.g. star parties, talks, workshops; see Section 8) during the past year.

2.6 Gold Medal Award Park System

On 26 September 2017, Arizona State Parks and Trails won the Gold Medal for best managed state park system in the nation from the National Recreation and Park Association (NRPA). As part of the nomination package, Oracle State Park was specifically highlighted as being certified by the International Dark-Skies Association and that it hosts regular star parties with local astronomy groups attracted by some of the darkest skies in the world for celestial viewing.



3. Park Lighting

3.1 Lighting Projects in 2016-17

No changes were made during the past year to Park lighting.

3.2 Camping DOs and DON'Ts

Overnight camping began in September 2017. An initial set of Camping Guidelines was provided to campers upon entrance to the Park. It reminds campers to enjoy the Park's night sky. The first "Don't" is to protect that night sky.

Oracle State Park **5 Camping DOs and DON'Ts**

DO... Check out the Kannally Ranch House and Gift Shop.

DO... Enjoy over 16 miles of trails.

DO... Appreciate our diverse flora and fauna.

DO... Enjoy scenic mountain views.

DO... Admire the fantastic night sky!

DON'T... Use excessive lighting at night, per International Dark Sky Association regulations.

DON'T... Take bikes or dogs on Bellota Trail or Windy Ridge Trail.

DON'T... Leave trash or litter.

DON'T... Use open flames; only propane stoves or charcoal at Group Use Area.

DON'T... Use generators past 10 PM.

4. Oracle State Park Night Sky Quality

4.1 Weather Impacts

Unusually cloudy weather continued to impact southern Arizona in 2016 and 2017. Therefore, only limited opportunities occurred to obtain Sky Quality Measurements during moonless nights at Oracle State Park.

4.2 Sky Quality Measurements

Sky Quality Measurements were taken at Oracle State Park on different nights, at various times, and under varying sky conditions. Measurements were made using the Park's Unihedron Sky Quality Meter with Lens (SQM-L), serial number 8530. The meter measures the sky brightness in units of "magnitudes per square arc second". As most astronomers and the knowledgeable public think in terms of "what's the faintest star visible?" the following chart developed by K. Fisher (<http://www.unihedron.com/projects/darksky/images/MPSASvsNELM.jpg>) provides a conversion to visual magnitudes.

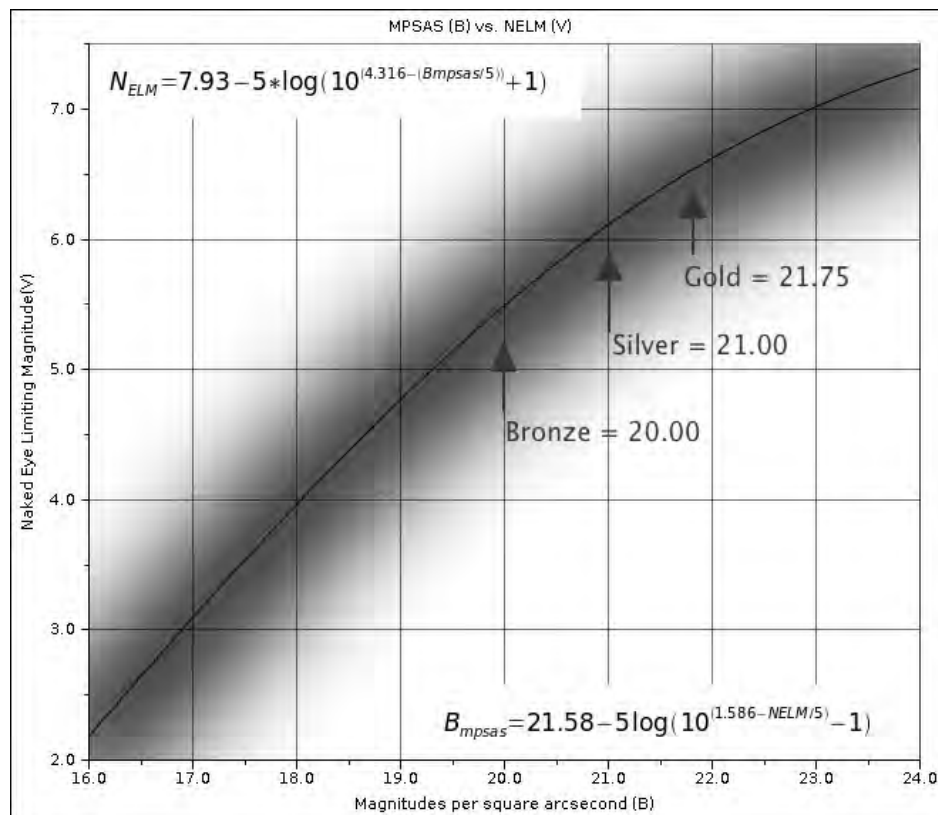


Figure 4.1 Sky Quality Chart vs IDSP Tiers

The "International Dark Sky Park" levels of Gold, Silver, and Bronze have been added to the chart.

Table 4.1 shows the night sky quality measurements taken at the Park from December 2016 through May 2017.

Oracle State Park - Sky Quality Measurements

Site	Date/Time	Lat/Long	Elevation	Conditions	SQM
Kannally Ranch House patio	12/31/16 2350 MST	N 32° 37' 17.2" W 110° 44' 47.7"	4290 ft	Some clouds, high humidity	21.35
Kannally Ranch House patio	01/27/17 2130 MST	N 32° 37' 17.2" W 110° 44' 47.7"	4290 ft	Clear	21.38
Kannally Ranch House patio	03/17/17 2200 MST	N 32° 37' 17.2" W 110° 44' 47.7"	4290 ft	Clear	21.51
Kannally Ranch House parking lot	03/18/17 2136 MST	N 32° 36' 32.4" W 110° 43' 58.8"	4290 ft	Clear; Measurement by Dr. Barentine, IDA, using IDA SQM-L	21.32
Kannally Ranch House patio	03/23/17 2300 MST	N 32° 37' 17.2" W 110° 44' 47.7"	4290 ft	Clear	21.65
Kannally Ranch House patio	04/29/17 2315 MST	N 32° 37' 17.2" W 110° 44' 47.7"	4290 ft	Clear	21.48
Kannally Ranch House patio	05/20/17 2300 MST	N 32° 37' 17.2" W 110° 44' 47.7"	4290 ft	Clear	21.49
Kannally Ranch House patio	05/28/17 2345 MST	N 32° 37' 17.2" W 110° 44' 47.7"	4290 ft	Clear	21.51
				Meter loaned to another Park	

Table 4.1 Oracle State Park Sky Quality Measurements

During the time frame of SQM readings the overall average SQM at Oracle State Park was 21.46, which is slightly darker than the previous year's report. The darkest sky during the period was 21.65. This sky quality maintains Oracle State Park in the Silver tier range. For reference, the sky quality measurements documented in the 2014 Nomination Package was an average of 21.37, with the darkest reading at 21.46.

The Park's meter was temporarily loaned to another Arizona state park to determine their sky quality (for a possible IDSP submission to IDA). Sky Quality Measurements will resume in late 2017 at Oracle State Park using the Park's Unihedron SQM-L, serial number 8530.

4.3 Night Sky Photographs

The Milky Way photograph on the cover of this report is actually a magnet on sale in the Oracle State Park gift shop. The original photograph was by Mike Weasner, Chair, Oracle Dark Skies Committee, local amateur astronomer, and IDA member.

The same photograph is on an Arizona State Parks postcard available in the gift shop:



Oracle State Park, Center for Environmental Education, is a 4,000 acre wildlife refuge with over 15 miles of hiking trails that wind through the high desert oak-grasslands in the Catalina Mountain foothills northeast of Tucson. A section of the National Scenic Arizona Trail also transects the park.

The property once belonged to one of the earliest cattle ranching families in Oracle, and includes a unique Mediterranean and Moorish style ranch house listed on the National Register of Historic Places. Constructed between 1929-33, the adobe house was built four levels up the hillside.

Recognized as an International Dark Sky Park, Oracle State Park offers exceptional stargazing opportunities.

Place
Postage
Here

Name / Address Here



Online Reservations 24/7 at
AZStateParks.com
Or Call Reservation Center at
(520) 586-2283

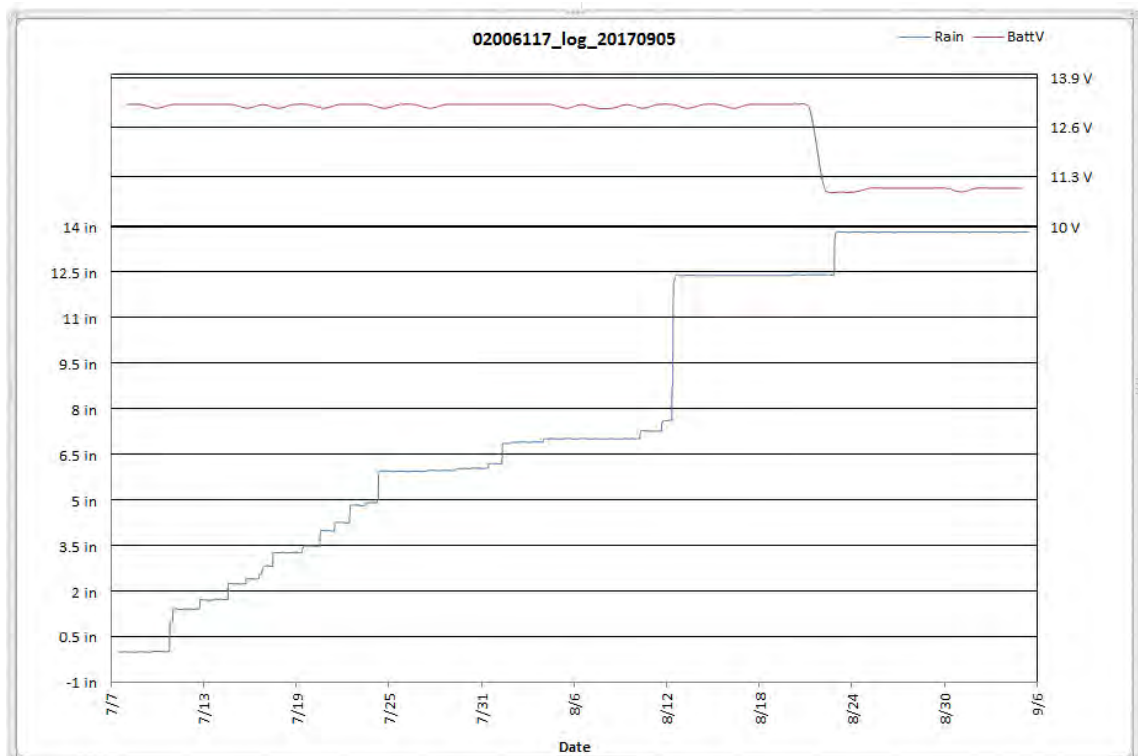
Like & Follow
AZStateParks



Photo Courtesy of Mike Weasner

The following photograph of Sirius and Orion taken at an Oracle State Park event by Mike Weasner with an iPhone shows how dark the sky can be at the Park.





5.2 Phenology Data

The Park documents seasonal changes that occur in local plants and animals to monitor timing of these changes and the effects of climate and weather on the Park's habitat. A dedicated Park volunteer collects this information and submits it to the USA National Phenology Network as part of the Nature's Notebook Project (https://www.usanpn.org/natures_notebook).

"Phenology Days" have been conducted at the Park. The following description is for one such event in September 2017:

Saturday, September 30: Phenology Bingo, 3pm. Join a Talk and Walk beginning at 3pm, with plant specialist, Hilary Cox. Meet in the Kannally Ranch House living room for a 45-minute power-point slide show to learn more about the National Phenology Program that allows public participation in scientific research, connecting people with nature to benefit our changing planet. Phenology refers to key seasonal changes in plants and animals from year to year – such as flowering, emergence of insects and migration of birds – especially their timing and relationship with weather and climate. Park visitors can help monitor seasonal changes and add observations to the national database. There will be an optional short group trail walk following the presentation, to participate in a "Phenology Bingo" activity, and special prize for the winner. Reservation preferred, free with park admission.

5.3 Bat Research

A “bat acoustical monitoring station” continues to be planned for installation at the Park. It will be used by bat researchers and will be documented in a future Annual Report.

In addition, a “Bat Night” is frequently held at the Park, as described here:

Saturday, July 29: Bat Night, 7:30pm. Bat Night begins at 7:30pm at the Kannally Ranch House for a 30-minute power point introduction to the bats of Arizona. The talk will be followed by an optional netting event excursion. The remote netting site will require an easy one-mile roundtrip trail hike. However, participants should be prepared for walking on non-level park trail, in the dark with the help of flashlights and ranger guide. Research Ecologist and Regional Manager for Arizona Game and Fish, Joel Diamond, Ph.D., is back by popular demand for this evening program to learn more about bats and get up close and personal to some of the flying mammal species living in our neighborhood. Please call for a reservation, (520) 896-2425; free with park admission. Bring your own flashlight if you have one!

6. Funding

Funding in 2017 was significantly increased by Arizona State Parks to support the new full-time positions and the expanded operations. New primitive campsites were added in late 2017 and will support astrophotographers and others who want to enjoy the night sky at Oracle State Park. Additional budget in 2018 is being requested to support expanded night sky events.

7. Arts and Culture

7.1 Dark Skies Celestial Concert

A “Dark Skies Celestial Concert”, held on 18 December 2016, was a joint event of the Oracle Piano Society and the Oracle Dark Skies Committee. It honored the 100th anniversary of the donation to the University of Arizona by Oracle resident Lavinia Steward that began the Steward Observatory.



The concert showcased astrophotography by Adam Block, University of Arizona, seen here being introduced by Mike Weasner, Chair, Oracle Dark Skies Committee:



The astrophotography was accompanied by musical selections with Dr. Stephen Cook, Artistic Director, Oracle Piano Society, at the piano:



Following the concert was a talk on the astronomical perspective of the “The Star of Bethlehem” by Dr. Christopher Corbally, astronomer from the Vatican Observatory. Here is Dr. Cook introducing Dr. Corbally:



A star party was held under partly cloudy skies after the talk with telescopes provided by the SaddleBrooke SkyGazers Club:



This event was a highlight of 2016.

8. Outreach

8.1 “Super Moon” Trail Music Event, 15 October 2016

Park visitors were able to do a very enjoyable pre-sunset walk along the Nature Trail Loop while taking in the sounds of live instrumental music at designated spots along the trail. After coming back to the Kannally Ranch House patio at sunset they were able to see views of the “Super Moon” Full Moon rising over the Galiuro Mountain range east of the Park using telescopes from the SaddleBrooke SkyGazers Club.



8.2 Adventures with the Moon, 11 February 2017

Prior to this popular program, visitors viewed the rising Moon using telescopes provided by the SaddleBrooke SkyGazers Club:



Then Oracle State Park volunteer Dick Boyer presented his “Adventures with the Moon” to Park visitors on the Kannally Ranch House patio:





The talk ended with “traveling to” and planting the American flag on the Moon:



8.3 International Dark Sky Park Celebration, 18 March 2017

This was the 2nd Anniversary Celebration of Oracle State Park being designated as an IDA “International Dark Sky Park”, recognizing dark skies as a limited resource needing protection and celebrating Oracle as an exceptional place for telescope viewing!

The first event of the day was a “Beginner Digital Astrophotography Workshop” conducted by Park volunteer Mike Weasner. This Workshop was an introduction to

taking nighttime astrophotos using digital cameras or smartphones, with or without or telescope.



After the talk there was live music on the Ranch House patio. IDA and ODSC had information tables:



After dark was star party using telescopes from the Tucson Amateur Astronomy Association and the SaddleBrooke SkyGazers Club.



8.4 Open House & Star Party, 29 April 2017

To celebrate the expanded operations at Oracle State Park, an open house was held at the Park. There were many activities during the day, including live music on the patio:





It was appropriate that on this Astronomy Day 2017 the SaddleBrooke SkyGazers Club was recognized by Arizona State Parks for their frequent, outstanding, and many times short notice support to Oracle State Park. Here are Don Cain (left) and Richard Spitzer (center) of the SaddleBrooke SkyGazers Club being recognized by Oracle State Park Manager Vince Micallef (right):



The support of Mike Weasner and the Oracle Dark Skies Committee to the Park was also acknowledged by Park Manager Micallef.

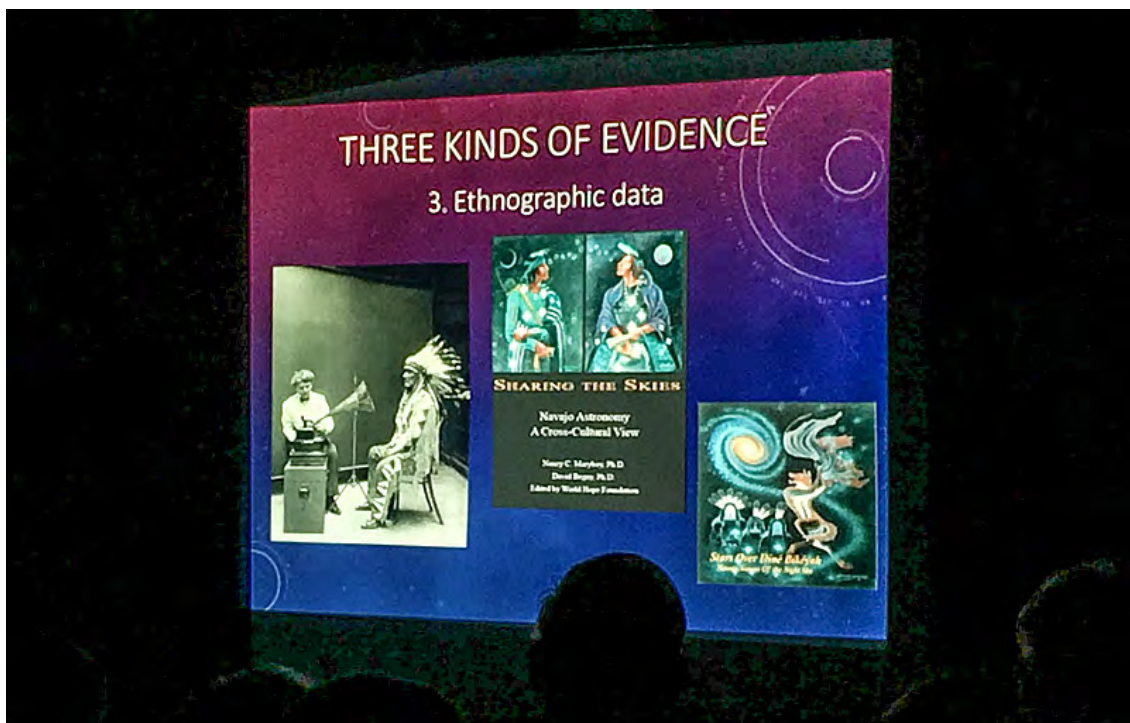


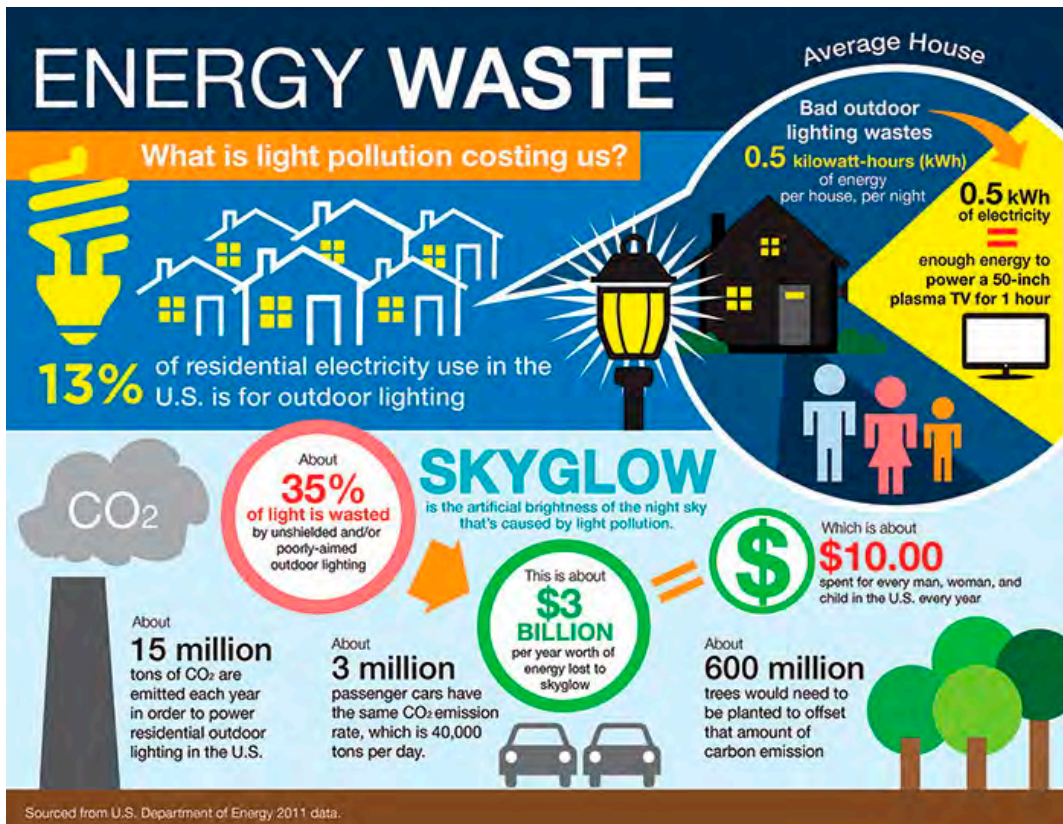
As darkness fell at Oracle State Park, many visitors braved the surprisingly cold temperatures to be treated by exciting views through the telescopes.



8.5 “Arizona’s Night Skies: Past, Present, and Future”, 20 May 2017

Dr. John Barantini of the International Dark-Sky Association (IDA) returned to Oracle State Park, Arizona State Park’s IDA “International Dark Sky Park”, gave a one hour presentation in the Kannally Ranch House living room to a packed room (standing room only) of mostly first-time visitors to the Park:





Protecting the night sky starts with **YOU!**

- 1 Light only what you need**
- 2 Use energy efficient bulbs and only as bright as you need**
- 3 Shield lights and direct them down**
- 4 Only use light when you need it**
- 5 Choose warm white light bulbs**
- 6 Join IDA!**
We need your help to continue the fight against light pollution.

Following Dr. Barentine's talk there was a star party with viewing using telescopes provided by the SaddleBrooke SkyGazers Club.



8.6 Live Music and Star Party, 24 June 2017

A nice crowd of people came to Oracle State Park to enjoy the cooler temperatures and live music on the upper patio of the historic Kannally Ranch House.



Some members of the Oracle Dark Skies Committee were at the information table.



Park visitors were treated to a visit by this Harris' Hawk.



After sunset three telescopes were set up by members of the SaddleBrooke SkyGazers Club and by Mike Weasner, ODSC Chair. Although viewing was somewhat hampered by clouds, Park visitors were treated to views of Jupiter and four of its moons, Saturn and its Ring, and some other night sky objects. And of course, they were able to appreciate seeing night sky view from our “International Dark Sky Park”.

8.7 Full Moon Night Hike, 8 July 2017

This Oracle State Park event was a ranger-led evening nature walk in the park. The rising Full Moon was visible through thin clouds and greeted the hikers as they arrived at the Park:



The sky at sunset did not look promising:



After the hike was over, holes in the clouds allowed telescope viewing of two planets, but unfortunately the Full Moon remained behind the clouds. The hikers were thrilled by the views of Jupiter, its four Galilean Moons, and Saturn, its Ring, and its moon Titan. Although the clouds hampered viewing, the evening temperature and breezes made for a pleasant Full Moon Night Hike. The telescope views of the Moon, Jupiter, and Saturn made a nice complement to the hike at Oracle State Park.

8.8 South Korean Dark Skies Delegation Visit, 21 July 2017

In January 2015, Oracle State Park hosted a South Korean Dark Skies Delegation Visit. They had wanted to see an IDA “International Dark Sky Park” and learn what was required from a Park whose application had been successful. Their in efforts in 2015 resulted in Yeongyang Firefly Eco Park becoming an IDSP later that year. On 21 July 2017, Oracle State Park once again hosted members of a Dark Skies Delegation, this time with members of the staff of Yeongyang Firefly Eco Park, including the Manager of Yeongyang Firefly Eco Park, Jung Young Kil. Professor Won-Kil Jeong, from Daegu Haany University, who we called "David", returned as the translator.



The delegation enjoyed the view from the Ranch House:



Everyone agreed that their visit was enjoyable and that Yeongyang Firefly Eco Park and Oracle State Park should someday become “Sister Parks” due to the similarities in their missions.



8.9 Total Solar Eclipse Presentation & Star Party, 23 September 2017

Mike Weasner of the Oracle Dark Skies Committee gave a presentation in the living room of the Kannally Ranch House on his 21 August 2017 Total Solar Eclipse experience. Oracle, Arizona, only saw a partial eclipse with the Sun covered about 60%. Weasner's talk let the attendees experience what it was like to prepare for, travel to Hopkinsville, Kentucky, and see and photograph "The Great American Eclipse".



A Star Party followed Weasner's talk with telescope viewing and night sky interpretation, thanks to the Tucson Amateur Astronomy Association and the SaddleBrooke SkyGazers Club. The crescent Moon, some planets, stars, nebulae, and galaxies were viewed through the telescopes on a beautiful night at Oracle State Park.



9. Community and Media Relations

9.1 Oracle Dark Skies Committee

The Oracle Dark Skies Committee supported two events outside of Park activities during this reporting period. The first was a star party at El Rancho Robles guest ranch in Oracle, 26 October 2016. A company that was doing its annual retreat at El Rancho Robles guest ranch in Oracle had requested that a star party be held for its employees. The weather cooperated and the ODSC provided dark sky literature and telescope viewing:





About 30 very enthusiastic ranch guests who came from all across the United States had a thoroughly enjoyable evening at El Robles Ranch. They were able to view the planets Venus, Saturn, and Mars shortly after sunset. And then later in the evening they saw the benefit of the dark sky available in Oracle. The ODSC members explained the harmful impacts of Light Pollution, gave a Light Pollution demonstration, and discussed how Oracle State Park became an IDA "International Dark Sky Park". The guests were shown how they could see the Andromeda Galaxy, 2.5 million Lightyears away, with just their eyes. They also saw the Big Dipper, several constellations (including the popular Cassiopeia constellation), the Double Cluster, the Pleiades, and the Milky Way. Using the telescope, they viewed M13 (Great Globular Cluster in Hercules), M57 (Ring Nebula), and the colorful double star Albireo. The star party ended about 9pm, a little over 3 hours after it began.

The second event was "Family Reading Night" at Mountain Vista School in Oracle, 21 March 2017. Mountain Vista School students, parents, and teachers who attended the "Family Reading Night" were treated to special views of the planets Venus and Mars, the Orion Nebula, and stars through four telescopes which were set up at the school by the SaddleBrooke SkyGazers Club and Astronomy Adventures Arizona.



They were also able to learn about the harmful effects of light pollution and many were able to view a light pollution demonstration. The ODSC provided literature about the effects of Light Pollution.



9.2 Media Relations

During this reporting period, there were several local and statewide news media stories about Oracle State Park and the dark sky in Oracle, Arizona. Arizona Illustrated, a weekly series on the Tucson PBS TV station, broadcast two shows highlighting Oracle.



Video available at <https://www.youtube.com/watch?v=hK0UcvsvkwI&t=35s>



Video available at <https://www.youtube.com/embed/yw-5i577B3c>

The Paris Review ran this story:

the PARIS REVIEW

Zonies, Part 5: Sky Glow

By Mike Powell February 16, 2017

OUR CORRESPONDENTS

Mike Powell's column is about living in Arizona.



CHIP SIMONE, *UNIVERSE*, 2005. COURTESY THE ARTIST AND JACKSON FINE ART.

<https://www.theparisreview.org/blog/2017/02/16/zonies-part-5-skyglow/>

The Arizona Republic did this story:

Where are the 'darkest' places in Arizona?

Mark Nothaft, Special for The Republic | azcentral.com Published 7:04 a.m. MT April 25, 2017 | Updated 10 hours ago

Only in Arizona: You haven't really seen heavenly bodies until you've experienced remote parks and regions that cater to stargazers



(Photo: National Park Service)

It wasn't until a road trip with my son last summer had I experienced a truly dark sky.

Like really dark. Phoenix at 3 a.m. times 20 dark. So dark you'll never find the rental car until the morning, but at least we're surrounded by, literally, billions of stars. I'm talking E.T. phone home dark.

Sonny and I geeked out on planets and constellations last June with a few dozen other space nuts at wildly remote Great Basin National Park in Nevada. Visible to the naked eye were five of the eight planets in our solar system, scores of man-made satellites, the unmistakable swirl of the Andromeda Galaxy and the cloudy ribbon of the Milky Way that contains our own galaxy — all because it was pitch-black.

We think seeing a few shooting stars and the Big Dipper are a big deal in Phoenix, but, because of light pollution we're missing out, shortchanging our celestial experience. There's a *lot* more out there.

In Arizona

So where do we go in Arizona to really see stars? Are there "dark skies" near us?

"Arizona has been a preferred location for astronomers, professional and amateurs, since the early 1900s," said Mike Weasner of the Oracle Dark Skies Committee, which worked to receive dark-sky status in 2014 for Oracle State Park by the International Dark-Sky Association. "(This is) due to generally good weather and the mountains to get above the thicker portion of the atmosphere."

Oracle State Park, Grand Canyon National Park, Wupatki National Monument and Grand Canyon-Parashant National Monument are four IDA-designated "dark sky" parks in the state, meaning the sites actively practice responsible lighting policies and public education.

Broader dark-sky communities include Sedona, the Village of Oak Creek and Flagstaff, the world's first IDA dark-sky city and home of the world-renowned research facility at the Lowell Observatory.

Also suited for stargazing

But there also are other non-IDA sites well suited to stargazing. Kitt Peak National Observatory southwest of Tucson operates 24 optical and two radio telescopes, making it one of the most important sites for astronomy in our state. The place feels like X-Files meets ASU. Behind the tours and school groups, there's some serious science going on.

Same with Mount Graham International Observatory near Safford, which is an astrophysical research facility managed by the University of Arizona and home of The Vatican's Advanced Technology Telescope.

Protecting dark skies

The protection of truly dark night skies "is not only important to astronomers, both professional and amateur," Weasner said, "it is also important to protecting human health, wildlife, environment, reducing wasted energy costs, climate and cultural heritages."

"And, while this is surprising to some, protecting the night sky also enhances our safety and security," he said.

International Dark-Sky Association

3223 N. First Ave., Tucson

520-293-3198

www.darksky.org
(<https://www.darksky.org>)

So we can watch the watchers. Think I'll just keep an eye toward the stars.

Contact "Only in Arizona" columnist Mark Nothaft at marknothaft.onlyinaz@gmail.com (<mailto:marknothaft.onlyinaz@gmail.com>). Send him the weird and fun facts and places found #OnlyInArizona.

Read or Share this story: <http://azc.cc/2phcR5i>

[. Fullscreen](#)

The local Miner newspaper did this photo spread:

May 3, 2017

www.copperarea.com

San Manuel Miner | 7

Oracle State Park hosts open house, star party



It was appropriate that on this Astronomy Day 2017 the SaddleBrooke SkyGazers Club was recognized by Arizona State Parks for their frequent, outstanding, and many times short notice support to Oracle State Park. Here are Don Cain (left) and Richard Spitzer (center) of the SaddleBrooke SkyGazers Club being recognized by Oracle State Park Manager Vince Micallef (right).

Michael Weasner Submitted



As darkness fell at Oracle State Park, many visitors braved the surprisingly cold temperatures to be treated by exciting views through the telescopes.

Michael Weasner Submitted



The support of Mike Weasner and the Oracle Dark Skies Committee to the Park was also acknowledged by Park Manager Micallef.

Michael Weasner Submitted



Listening to the Undercover Band.

Jennifer Carnes Miner



Viewing the night sky.

Michael Weasner Submitted



Oracle's Own Fred Terry performs at the Oracle State Park.

Jennifer Carnes Miner



The Undercover Band performs at the Oracle State Park.

Jennifer Carnes Miner



There were activities for the kids.

Michael Weasner Submitted

Arizona Department of Tourism ran this article citing Oracle State Park in their 2017 issue of the Official Arizona State Visitor's Guide:



SEEING STARS

Witness the cosmos up close at Arizona's world-renowned observatories, star parties and museums

by TIM VANDERPOOL



Observe the Milky Way and the
cosmos at the Grand Canyon.
BY PHOTO CONTEST WINNER
ERIC MENASCO

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With so much of Arizona's beauty right at ground level, it's sometimes tough to turn your gaze skyward. But look up, and you'll see white telescopes gleaming atop nearby peaks, or mesmerizing light shows in state-of-the-art planetariums. You might enjoy leisurely star parties at our soothing state parks, or stargaze poolside at lovely resorts. As you can tell, Arizona simply revels in its nighttime treasure. And you're invited to the celebration.



ARIZONA'S INTERNATIONAL DARK SKY COMMUNITIES

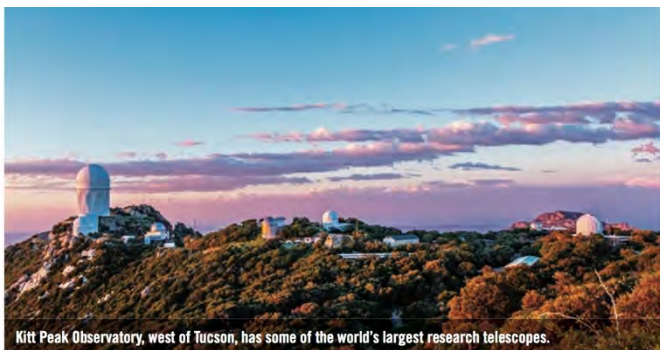
Many Arizona cities have embraced dark sky policies, encouraging limitations on nighttime lighting. They include **Flagstaff**, which became the world's first International Dark Sky Place in 2001. Today it hosts telescope gatherings in downtown's Heritage Square and in autumn at the popular Star Party at Buffalo Park.

Sedona's Red Rock Country is also famous for brilliant night skies; find red supergiant stars, planetary nebulae and remote galaxies with Sedona Star Gazing. The adjacent **Village of Oak Creek** marks its own Dark Sky status with parties hosted by the Astronomers of Verde Valley.

OBSERVATORIES

From a lofty perch west of Tucson on the Tohono O'odham homelands, the **Kitt Peak Observatory** peers deep into outer space and hosts daily tours through the world's largest research telescope array. Get up close and personal with the massive Mayall scope, and then savor jaw-dropping views from the deck around its 500-ton dome.

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Kitt Peak Observatory, west of Tucson, has some of the world's largest research telescopes.

SEAN PARKER

Southern Arizona's **Fred Lawrence Whipple Observatory** has been another leader in scientific discovery, recently helping to pinpoint an Earth-type planet some 1,400 light years away. The site, jointly operated by the Smithsonian Institution and the University of Arizona, also tracks star-like objects called brown dwarfs, and gamma rays striking the Earth's atmosphere. Start at the visitors center, by poring over detailed miniatures of Whipple's telescope. Then tour the real thing from spring through fall, where you'll discover how these elegant giants track the night sky.

You'll find one of the world's most powerful telescopes at the **Mount Graham International Observatory**, high in southeastern Arizona's Pinaleno Mountains. But your visit actually starts at the Discovery Park Campus, far below in Safford, where you'll see how the telescope's gargantuan mirrors are made. Then venture up the mountain, May through October, for a behind-the-scenes peek at these mighty scopes.



Lowell Observatory, Flagstaff

MARK LIPCZYNSKI



Night viewing at Challenger Space Center Arizona in Peoria

JULIE FOSKETT

In the 1890s, Percival Lowell paired his wealth with his passion, building the soon-to-be-legendary **Lowell Observatory** atop Mars Hill in Flagstaff. Observatory scientists went on to discover Pluto, and today the facility remains at the forefront of asteroid detection. See where it all happens, and peer through the elegant, recently refurbished, circa 1896 Clark Telescope.

You'll find the **Flaundrau Science Center & Planetarium** on the University of Arizona campus in Tucson, where the observatory is open most nights Thursday through Saturday, and the newly renovated planetarium theater—complete with a cutting-edge digital projection system—presents shows such as *Asteroid: Mission Extreme*, produced by National Geographic. This presentation is particularly relevant to the university since it is leading the first NASA mission to collect and return a primitive, carbonaceous asteroid fragment to Earth.

The **Mt. Lemmon SkyCenter**, tucked high in the mountains above Tucson, recently made news for the discovery of a distant supernova. It also welcomes visitors with programs such as SkyNights, where they can learn about the cosmos through the Southwest's largest telescope devoted to public viewing.

STAR PARTIES

Several Arizona State Parks host lively star parties, complete with astronomy experts and plentiful scopes. At **Oracle State Park**, an International Dark Sky Park north of Tucson, picnicking stargazers and astronomy buffs scan the night skies. You'll find similar star parties at **Red Rock**, **Kartchner Caverns**, **Tonto Natural Bridge**, **Catalina**, **Lost Dutchman**, **Dead Horse Ranch**, **Alamo Lake**, **Cattail Cove**, **Patagonia Lake** and **Homolovi** state parks.

Many top resorts have also embraced stargazing with a passion. **L'Auberge de Sedona** takes advantage of Red Rock Country—and its city's status as a Dark Sky Community—by offering guests telescope viewing three nights a week, complete with experts who chart clusters and constellations. In Tucson, telescope-toting astronomers from the Mt. Lemmon SkyCenter guide families through the heavens at **Loews Ventana Canyon Resort** and the **Hilton Tucson El Conquistador Golf & Tennis Resort**. **AZ**



Tim Vanderpool is a Tucson writer who frequently stares off into space.

SPACE MUSEUMS

Arizona Science Center

This nationally ranked planetarium in Phoenix offers intriguing shows, such as *Space Next*, which documents space exploration's past, present and future, with hopes of inspiring the next generation of scientists.

Challenger Space Center Arizona

Don't miss simulated flight missions—complete with flight crews, mission controllers and scientists—at this Peoria science hotspot. The mission control room is cloned from NASA's Johnson Space Center.

Pima Air and Space Museum

Venture into the cosmos in Tucson with kid-friendly exhibits, such as a display that shows your weight on the moon, and a monthly hands-on class featuring rockets.

MADISON KIRKMAN



SAVE THE DATE Stellar experiences can be found throughout the Grand Canyon State on the events calendar at VisitArizona.com.

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10. Miscellaneous Materials

10.1 Friends of Oracle State Park

The Friends of Oracle State Park is a membership group that provides ongoing support and volunteers to both Oracle State Park and the Oracle Dark Skies Committee. The dedication of this group to dark sky activities is notable and much appreciated. In December 2016, Mike Weasner, Chair, Oracle Dark Skies Committee, was elected as Vice President of the Friends of Oracle State Park. In addition, the Oracle Dark Skies Committee was made a formal Committee of the Friends of Oracle State Park, tightening the relationship between the two organizations and allowing donations to the Committee to be tax deductible under the Friends 501(c)3 status.

11. Document Revisions

0.1	19 September 2017	Initial Committee review draft
1.0	27 September 2017	Final version