

# Dark Sky Sites in Iowa

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## January 10, 7:30pm-Virtual Only

Title: Dark Sky Sites in Iowa

Speaker: University of Iowa Emeritus Professor Steve Spangler



There is nothing more inspiring to an astronomer than a dark, clear sky undisturbed by artificial lights. Unfortunately, most of us live in places which are badly light-polluted, and where the magnificence of the night sky is significantly impaired. This motivates us to find places where the sky is dark, and to visit them as astro-tourists. The BBC recently published an article "The last places on Earth to see truly dark, starry nights". All of them were in places like the Atacama desert of Chile and the Atlantic coast of Morocco. None were in the United States. Not easy for a weekend trip from Cedar Rapids or Monticello, Iowa. In this talk, I will describe my experience with some quite good sites in the state of Iowa, that are easy to visit. My list consists of state and county parks that have camping and/or cabin facilities, so an astronomer can enjoy a dark, starry sky all night.

## Recording:

<https://us06web.zoom.us/rec/share/wCwvNpTaeNZIE-3ndAlOo4DuXtT0mlT-4oYhUlhqJPPAT3H-DZsVsAn74u0zh2Mk.Mi9b-83PFdHlc0wZ>

Passcode: aG!8mvHz

# Dark Sky Sites in Iowa

## Meeting summary

### Quick recap

The meeting focused on a presentation by Steve Spangler about dark sky sites in Iowa, highlighting locations with minimal light pollution where stargazing is optimal. Steve shared his experiences observing at various state parks and conservation areas, emphasizing the Bortle scale for measuring darkness and recommending sites like White Rock Conservancy, Lake Darling State Park, and Nine Eagle State Park. James, an advocate for dark sky initiatives in Iowa, joined the discussion to share his efforts in raising awareness about light pollution and its economic and environmental impacts. The group also discussed the importance of preserving dark skies for wildlife, astronomy, and tourism, with suggestions for community engagement and policy changes.

### Next steps

- Steven: Email the PowerPoint presentation link to Chris for archiving and sharing with members.
- James: Put contact email (james at darkskyIowa.org) in the chat for anyone to reach out.
- Steven: Send James the contact/link information for the Ames Area Amateur Astronomers club.
- James: Continue raising awareness about dark sky/astrotourism and light pollution issues via upcoming interviews (e.g., with Ed Fallon's Fallon Forum and Iowa Public Radio's Talk of Iowa).
- James: Work on creating an actual darkskyIowa.org web page (not just redirect to Facebook).

### Summary

#### Dark Sky Observations and Events

Chris Kardos, president of the Cedar Amateur Astronomers, introduced Steve Spangler's presentation on dark sky sights in Iowa, emphasizing the challenges of light pollution. Steve Spangler, a professor emeritus from the University of Iowa, discussed his visual observations of the Cepheid variable star eta Aquilae and shared advice for others interested in variable star observations. The conversation ended with Chris Kardos announcing upcoming events, including a NASA film screening and a presentation by Professor Brent Studer from Kirkwood Community College.

#### Iowa's Dark Sky Observatories

Steven presented a talk on dark sky sites in Iowa, discussing the Bortle scale for measuring darkness and reviewing satellite maps of light pollution across the state. He noted that most of Iowa is classified as Bortle 8 or 9, with only a small area along the Missouri border reaching classes 3 to 4. Steven compared the Eastern Iowa Observatory and Learning Center to these dark sky sites, suggesting it might be rated slightly lower than the map indicates, but still offers good viewing conditions.

# Dark Sky Sites in Iowa

## Iowa's Best Dark Sky Observing Sites

Steven presented his favorite dark sky observing locations in Iowa, focusing on three main sites: White Rock Conservancy near Coon Rapids, Lake Darling State Park near Brighton, and Yellow River State Forest near McGregor. He emphasized that these locations offer excellent dark sky conditions for stargazing, with White Rock Conservancy and Lake Darling both rated Bortle Class 4.1 but likely better in practice. Steven highlighted the natural beauty and amenities of each site, including camping options and cabins for accommodation. He also discussed the geological and ornithological interest of Yellow River State Forest, as well as the park ranger's efforts to protect dark skies. Steven encouraged attendees to visit these locations for astro-tourism and stargazing experiences.

## Iowa's Dark Sky Camping Destinations

Steven discussed various camping locations in Iowa, highlighting Nine Eagle State Park in Lamonae as a particularly dark sky site with excellent stargazing opportunities. He noted that the park, located in a remote area near the Missouri border, has a darker sky rating of 3.7 compared to other sites he visited. Steven expressed interest in visiting Nine Eagle State Park again next summer to further explore its dark skies and potentially discuss light pollution concerns with the park ranger. He also emphasized the importance of conserving dark skies at both observatories and natural sites, encouraging attendees to communicate their interest in dark skies to Iowa DNR and county conservation boards.

## Iowa Observing Sites Discussion

The group discussed observing locations in Iowa, particularly focusing on Nine Eagle State Park near the Iowa-Missouri border, which Steven identified as one of the darkest spots in Iowa. John Centala shared his experience observing the Leonids meteor shower there in 1998, while camping near an abandoned farmhouse. The conversation also touched on the zodiacal light, with several members sharing their observations from various locations in Iowa, including Eastern Iowa Observatory and PAL Dows. The discussion concluded with a note about observing opportunities in the Cedar Rapids area, though camping is not allowed at some sites after 4:30 AM.

## Dark Sky Experiences and Initiatives

The group discussed dark sky locations, with John Centala and others sharing experiences about the Nebraska Star Party and its stunning night skies near Merritt Reservoir. AlanE provided context about Bortle classifications and light pollution, noting that satellite measurements show light emissions from Earth while amateur astronomers focus on scattered light visible from the ground. Greg shared an anecdote about a University of Iowa program hosting students from Hong Kong and Guangzhou who had never seen stars before, highlighting the importance of dark sky experiences for urban populations. The conversation ended with Michael mentioning an article about astrotourism initiatives in Iowa, leading to an introduction between Michael and James Bruton, who was working on improving astrotourism and addressing light pollution in Iowa.

# Dark Sky Sites in Iowa

## Dark Sky Advocacy in Iowa

James discussed his efforts to raise awareness about light pollution and dark sky preservation in Iowa, highlighting its economic and environmental benefits, particularly for rural areas. He shared his experience at the Iowa Nature Summit and mentioned an article in the Iowa Capital Dispatch that sparked interest and support from various individuals. James emphasized the need for education and strategic planning, noting that dark sky initiatives could boost rural economies and improve wildlife habitats. Participants discussed potential actions, such as engaging local communities, contacting astronomy clubs, and leveraging existing resources, with Steven suggesting collaboration with the Ames Area Amateur Astronomers. The group also explored the impact of light pollution on wildlife and human health, agreeing on the importance of raising awareness and implementing practical solutions.

AI can make mistakes. Review for accuracy.

## Transcript

WEBVTT

1

00:00:00.020 --> 00:00:01.410

Steven Spangler: Thanks, first of all.

2

00:00:02.000 --> 00:00:13.859

Steven Spangler: Thanks for the character reference there, of being a likable guy, sort of a... I'll try and live up to that. Well, as Chris said, my, talk is Dark Sky Sights in Iowa.

3

00:00:13.890 --> 00:00:22.300

Steven Spangler: And this is going to be different than, most of all the talks I've given previously in the Public Night, program.

4

00:00:22.370 --> 00:00:31.400

Steven Spangler: And then in those, I talked about some, current topic and asked, astronomy, or recent research developments, things of this sort.

5

00:00:31.400 --> 00:00:44.340

Steven Spangler: This is not going to be about dealing with research, but I think it will be something that all of us who are interested in astronomy can really relate to, which is getting to a place where

6

00:00:44.340 --> 00:00:48.600

Steven Spangler: We can really, enjoy the magnificence of the sky.

7

00:00:48.870 --> 00:00:52.300

# Dark Sky Sites in Iowa

Steven Spangler: So I might say the, start of this is,

8

00:00:52.850 --> 00:00:59.090

Steven Spangler: The, the problem is sort of stated right here. There was... I got a,

9

00:00:59.500 --> 00:01:07.289

Steven Spangler: I'm on the email list from the Ames Amateur Astronomy Organization, our sister organization over in Ames, Iowa.

10

00:01:07.480 --> 00:01:16.309

Steven Spangler: And Mackenzie Uhlenhop, who's, sort of in charge of that, sent this around recently. I think there was a more recent version of this BBC article.

11

00:01:16.450 --> 00:01:28.509

Steven Spangler: And, the title was, The Last Places on Earth to See Truly Dark Starry Nights. And so it said, we found places that were really good to go see the sky.

12

00:01:28.680 --> 00:01:43.509

Steven Spangler: So, it turns out I went through that list, and all but one was in South America and Africa. So there weren't any in the United States, there was one in the Pyrenees in Europe. So they're all, well, they're very distant locations.

13

00:01:43.510 --> 00:01:54.469

Steven Spangler: And it says, here on the bottom of the slide, it's hard for a weekend trip from Grundy Center to go to one of these places. So I think all of our members, or almost all of them.

14

00:01:54.580 --> 00:01:58.110

Steven Spangler: live in, in eastern Iowa.

15

00:01:58.110 --> 00:02:16.609

Steven Spangler: And so it'd be nice to have a list of locations where one could go to see at least a very reasonably dark sky site, here in Iowa. And, so I was kind of viewing something like a weekend, sort of astrotourism event that we could have in Iowa.

16

00:02:17.450 --> 00:02:35.030

Steven Spangler: So, I might say before moving on that one of the attractions that was mentioned in the BBC article, and that you could see in some of these places, was seeing something called the zodiacal light. So here is a picture of the horizon here, and you can see the dark sky.

# Dark Sky Sites in Iowa

17

00:02:35.030 --> 00:02:40.559

Steven Spangler: This would be probably a picture shortly before, before dawn.

18

00:02:40.690 --> 00:02:50.839

Steven Spangler: And what you can see is that there's this cone of light extending up from the horizon, and that's not light pollution at all. That's a natural phenomenon in the sky.

19

00:02:50.840 --> 00:03:09.039

Steven Spangler: And it's called the zodiacal Light because the zodiac is kind of the popular name for what we call the ecliptic, or the path of the, essentially, the planets and the moon and the sun around the sky. And so the reason you can see that it aligns with that, this is the planet Venus down here.

20

00:03:09.040 --> 00:03:19.119

Steven Spangler: And this is the planet Jupiter here, so of course they're on the ecliptic. And up here is the Pleiades, which is also on the ecliptic. So there's this cone of light.

21

00:03:19.190 --> 00:03:35.349

Steven Spangler: But to see that, you need really dark skies. I've been told that it's actually... this phenomenon is mentioned in the Quran, but they were indicating that as one of the real attractions for going to one of these places. It'd be a sky dark enough where you could see that.

22

00:03:36.190 --> 00:03:52.609

Steven Spangler: Now, in contrast to the locations throughout the world, I decided to limit my region of consideration for astronomy trips, as shown on the map here. So this is something where I could back up my trailer.

23

00:03:52.610 --> 00:04:01.010

Steven Spangler: go drive in a few hours and spend a couple of, couple of nights in a location, anywhere in that map, anywhere in Iowa.

24

00:04:01.010 --> 00:04:12.849

Steven Spangler: And so the question is, where do we, where do we go, on that map to find places that would be, a big improvement on the skies, say, in our backyards?

25

00:04:12.850 --> 00:04:25.210

# Dark Sky Sites in Iowa

Steven Spangler: And just for point of reference, I think probably all CAA members are good at their map reading skills, but the happy face is, of course, to indicate Cedar Rapids, which is sort of where our region is centered.

26

00:04:25.210 --> 00:04:49.900

Steven Spangler: So what I'm going to be doing tonight is talking about some locations on that map where I think are good for observing the night sky, and would in fact be an improvement over our observatory, the Eastern Iowa Observatory and Learning Center, which is a fantastic facility. But as I'll discuss in a little bit, there are better places to go if you really want to get a good dark sky.

27

00:04:49.900 --> 00:04:51.490

Steven Spangler: experience.

28

00:04:52.300 --> 00:05:02.699

Steven Spangler: Okay, so the question is, if we're talking about, dark skies, how would we put a number on this, or to somehow, categorize this?

29

00:05:02.850 --> 00:05:20.360

Steven Spangler: And so, there is a scale... there is a way of describing this called the Bortle Scale, and I was put onto this by Deb Bonzer a few years ago, who was referring to this, and so I hadn't really run across it before, or had forgotten that I had read about it.

30

00:05:20.360 --> 00:05:29.760

Steven Spangler: It turned out it's introduced... the article that describes it was in Sky and Telescope magazine in February of 2001.

31

00:05:29.800 --> 00:05:43.919

Steven Spangler: So, for CAA members, a real advantage of being in our club is that John Centella runs a fantastic library, and there's all the issues of Sky and Telescope back to 1963. I've checked it out.

32

00:05:43.920 --> 00:05:51.499

Steven Spangler: So this issue will be in there, so if you're curious, you can, you can read it. It's a quite good article, because of what this...

33

00:05:51.520 --> 00:05:59.079

Steven Spangler: scale is, and also gives some... some pictures illustrating what these various Bortle scales, represent.

34

00:05:59.240 --> 00:06:06.399

# Dark Sky Sites in Iowa

Steven Spangler: So, it turns out there are 9 classes in the Bordel classification. One is the darkest.

35

00:06:06.510 --> 00:06:24.390

Steven Spangler: And 9 is a light-polluted urban sky. So this is, I think, number 9, I think probably most of us can relate to more than number 1. And I tend to think if you're standing in downtown Iowa City or downtown Cedar Rapids or Des Moines, that's probably what you're seeing.

36

00:06:24.490 --> 00:06:38.930

Steven Spangler: So, it gives a, sort of a paragraph description of, each of these classes, and I'll just pick one example here, a Class 3, which it turns out will be a good, good class for what I, given what I'm going to talk about later.

37

00:06:39.140 --> 00:06:50.380

Steven Spangler: And Class III is characterized by, quote, some indication of light pollution is evident on the horizon. The Milky Way still appears complex.

38

00:06:50.380 --> 00:07:01.759

Steven Spangler: And globular clusters, such as M4, M15, etc, are all distinct naked eye objects. The zodiacal light is striking in autumn and spring.

39

00:07:02.000 --> 00:07:19.590

Steven Spangler: And then Class 2 would then be... you could see a lot more than in Class 3. Class 4, it has descriptions of how things have degraded from Class 3 and so forth, all the way up to Class 9, in which you have a hard time seeing the full moon.

40

00:07:19.720 --> 00:07:28.929

Steven Spangler: So, my own, now, it turns out that the Bordel class is quantitative, it means it puts a number on things, but it's also subjective.

41

00:07:29.020 --> 00:07:46.650

Steven Spangler: And the other problem with it is that it's determined not only by the darkness or brightness of the sky, but the eyeballs of the person making the observations, and so there can be some variations in that, too. So I think my 75-year-old eyeballs

42

00:07:46.650 --> 00:07:50.710

Steven Spangler: Are not as good as they were when they were 25 years old, for instance.

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43

00:07:50.880 --> 00:07:59.370

Steven Spangler: Now, you know, my own, sort of, off-the-cuff judgment is that probably the best sites in Iowa are border class 3 to 4.

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00:07:59.500 --> 00:08:12.090

Steven Spangler: And I think if anyone has made a more of a study of it than I have would dispute that, then by all means, speak up, either here or when I'm done talking. But that's kind of my...

45

00:08:12.100 --> 00:08:25.719

Steven Spangler: sort of, judgment. So how would we find out, how would we go about finding the parts of our state with dark skies? Well, there's two ways of doing it. There's a sophisticated approach.

46

00:08:25.720 --> 00:08:38.060

Steven Spangler: And the kind of the, the straightforward seat-of-the-pants approach. And the seat-of-the-pants approach would be, to get yourself the Iowa Department of Transportation map of Iowa.

47

00:08:38.059 --> 00:08:55.209

Steven Spangler: and pick places that are a long ways from any of our cities, and you'd probably work out pretty well. Now, the sophisticated approach is dark sky maps from orbit. So there are satellites that'll take pictures of the, like, pretty much a hemisphere at night.

48

00:08:55.210 --> 00:09:06.070

Steven Spangler: And they see where there's the big upwelling of, of light there, and they've taken those maps and used some algorithm to convert those to, portal class.

49

00:09:06.180 --> 00:09:13.720

Steven Spangler: Now, there's a problem in this, in that the satellite maps are looking at the light that's coming up.

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00:09:13.720 --> 00:09:33.469

Steven Spangler: Whereas the Bordel class, and what we're really interested in is if we're standing on the ground in these places, looking up and seeing how dark the sky is. And those two are not simply related. I mean, you'd think they'd be proportional, and I think they probably are, but there can be a good deal of variation as well.

51

00:09:33.620 --> 00:09:50.930

Steven Spangler: Now, you can hit this link, or it's [lightpollutionmap.app](http://lightpollutionmap.app). I kind of like that, but I just... I snipped out pieces of it, so I'm not going to hit that right now. I've got, I snipped

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out pieces and embedded it in my PowerPoint presentation, so we'll just, go on.

52

00:09:50.930 --> 00:09:56.350

Steven Spangler: So this is what Iowa looks like on this border class with the,

53

00:09:56.560 --> 00:10:11.579

Steven Spangler: With these pictures taken from orbit. So, you can see, first of all, here in the middle is, is Des Moines, the center of the, state, and that looks pretty terrible. Here is the Bortle class right over here with these numbers. You can see it's a

54

00:10:11.580 --> 00:10:20.490

Steven Spangler: Color bar, where white is number 9, all the way down to black, which would be, 1, and gray would be number 2.

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00:10:20.570 --> 00:10:28.640

Steven Spangler: Now, what you can, what you can see from there is that here in the middle of Des Moines, it's white, which you'd more or less expect.

56

00:10:28.680 --> 00:10:47.859

Steven Spangler: Now, over here, we can see here is Cedar Rapids right here, here's Iowa City here, here's Waterloo, and we have the Quad Cities way over here. So, you can look and see those little puddles of light. You can pretty well link those up one-to-one with the sort of mid-sized towns in Iowa.

57

00:10:48.130 --> 00:11:03.580

Steven Spangler: Now, if you look at the... according to this, the, the blue would be, like, border class 3 to 4. Then you see the only place you see blue in the state of Iowa is down here along the southern border with Missouri.

58

00:11:03.630 --> 00:11:12.390

Steven Spangler: There's a good reason for that, there aren't many people down there. Just kind of, if you're familiar with the geography of Iowa, this is Lamoni right here.

59

00:11:12.770 --> 00:11:19.049

Steven Spangler: And I know that for reasons I'll get back to in it, sort of later on in the talk.

60

00:11:19.230 --> 00:11:34.450

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Steven Spangler: So this is what we're, what we're dealing with, and so this would say, at this point, not in absolute downtown Des Moines, but it looks like it's probably out in West Des Moines, it says the border class is 8.3, so that's pretty bad.

61

00:11:34.490 --> 00:11:48.279

Steven Spangler: And the, description here is off in the side, it says the entire sky is brightened, no Milky Way visible, only the brightest constellations can be recognized. And I think all of us can, can relate to that.

62

00:11:49.210 --> 00:12:02.720

Steven Spangler: Okay, now on that scheme then, let's see where we are. I mean, all of us, enjoy the Eastern Iowa Observatory and Learning Center, and so this is a map of what the area looks like. So this is Cedar Rapids right here.

63

00:12:02.720 --> 00:12:12.050

Steven Spangler: This is actually... would be North Liberty, and here's Solon over here, and here's Mount Vernon, to give, give an indication, so...

64

00:12:12.050 --> 00:12:28.790

Steven Spangler: For those of you who go out there, you kind of know the geography of it. And so, as far as I could place it, the observatory is right here, right about here, and so it's a... it's the boundary between about 5 and 6, roughly. In fact, this map says

65

00:12:28.790 --> 00:12:33.290

Steven Spangler: It's a Bortle Class 5.0 at the observatory.

66

00:12:33.310 --> 00:12:50.880

Steven Spangler: Now, the description it has, and I'll just read this over here in case you can't see it, is rural to suburban transition, light pollution, domes visible in several directions, that sounds fun. The Milky Way still visible, but lacks detail. I think that's...

67

00:12:50.980 --> 00:13:05.840

Steven Spangler: too high a rating. In other words, my own experience, I've been out there with some nights where I thought it was pretty good, and you could see detail in the Milky Way. In other words, some of the dark obscuration lanes, and some places where you have star clusters showing up.

68

00:13:05.840 --> 00:13:11.350

# Dark Sky Sites in Iowa

Steven Spangler: So I think a... my own impression is that this map, which is useful.

69

00:13:11.510 --> 00:13:26.779

Steven Spangler: I think it overestimates what those Bortle classes are, and I'll kind of repeat that as I go through this, but it's, so, I think probably my sense is it's probably more like down about one... one class from that, so instead of

70

00:13:26.780 --> 00:13:37.310

Steven Spangler: 5.0, which is what this is saying over there, I think 4.0 is, is probably more like what the Eastern Iowa Observatory and Learning Center is like.

71

00:13:37.450 --> 00:13:50.020

Steven Spangler: Now, it's still, as you know, pretty good out there, and furthermore, it's such a great facility that I think it's, as I often tell people, I think it's the best facility for enjoying astronomy that I've ever seen anywhere.

72

00:13:50.080 --> 00:14:08.889

Steven Spangler: It'd be nice if we could somehow convince the city fathers and mothers of the surrounding communities to instill some light pollution control measures, and that might help it persist for a longer time into the future.

73

00:14:08.890 --> 00:14:21.690

Steven Spangler: But the main point is, I guess, is the, like I say, this is what the... our observatory is like. There are some places in Iowa that within a few hours driving, though, where it's clear that the sky's a lot better than that.

74

00:14:22.110 --> 00:14:36.590

Steven Spangler: So this is what, I'd, introduce this as. Here are Steve's favorite Iowa observing locations. And so I want to emphasize right at the outset here, this is anecdotes, not science. So these are places that I've been to.

75

00:14:36.620 --> 00:14:54.369

Steven Spangler: And, really liked, and had great astronomy observing experience with that. Most of the time, just naked eye, enjoying a really dark sky. Almost invariably, I'll bring along a pair of 750 binoculars, and then a couple times, I brought along telescopes as well.

76

00:14:54.440 --> 00:15:04.239

# Dark Sky Sites in Iowa

Steven Spangler: But it's worth it just to go out to one of these locations with just a star chart and your eyes, or a pair of binoculars and enjoy the dark sky sight.

77

00:15:04.480 --> 00:15:12.749

Steven Spangler: Now, this is a picture taken in a town called Manson, Iowa, which is, sort of close to Fort Dodds. There's a...

78

00:15:12.750 --> 00:15:24.620

Steven Spangler: a state park there called the Dolliver Memorial Park. It's a bit south of Fort Dodge, which is really pretty good. I didn't include that on these lists, but I was camping there at the time.

79

00:15:24.620 --> 00:15:38.870

Steven Spangler: So, Manson, Iowa has its town motto is Making an Impact, and I have this picture here, and the reason for that is Manson is pretty close to being the center of the Manson impact structure.

80

00:15:38.870 --> 00:15:51.750

Steven Spangler: There was a very large asteroid impact on the Earth 74 million years ago, and the center was about 5 miles down that road right behind me, and it created a crater

81

00:15:51.750 --> 00:16:00.779

Steven Spangler: That's, like, 30 kilometers in diameter, which is big. If you had a small telescope and look at the moon, you would see 30 kilometer craters very easily.

82

00:16:00.890 --> 00:16:17.649

Steven Spangler: It's all under the ground now, but when they do drillings for wells, or they do acoustic sounding of the earth, there's a structure that looks like a beautiful crater with a central peak in it and everything else, and that's the Manson Crater.

83

00:16:17.650 --> 00:16:23.990

Steven Spangler: But, so of these places I'm going to be talking about, all are state or county parks

84

00:16:23.990 --> 00:16:34.629

Steven Spangler: or private parks with good campgrounds, and so that's a kind of a main point. I think if you're going to go out for an astro tourism, vacation here in Iowa.

85

00:16:34.650 --> 00:16:48.510

# Dark Sky Sites in Iowa

Steven Spangler: I'm a big fan of camping. I've got a little camping trailer, and you can park yourself there, and get out all night, and or very many times during the night, and not having to worry about driving back anywhere.

86

00:16:48.540 --> 00:17:04.849

Steven Spangler: Now, I know some people are reverse to camping. If you don't want to do it, most of the places I'm going to talk about also have cabins that you can rent, and that would work equally well. So, you could, you could, have your lodging in one of these cabins, and then to go

87

00:17:04.849 --> 00:17:23.580

Steven Spangler: a very short distance, probably within walking distance, of a real dark sky site. So I'm going to go through, I've listed these in terms of what my favorites are, and to some extent, it's actually not organized in terms of the darkest to the brighter ones. I'll mention

88

00:17:23.579 --> 00:17:41.869

Steven Spangler: They're all good. There's, there's a couple of them that are better than the other ones, and I'll call that out as I go along. Okay, so number one is the... here's the map of Iowa again. My favorite one is the White Rock Conservancy in Coon Rapids, Iowa.

89

00:17:41.890 --> 00:17:53.389

Steven Spangler: And so, here is the map with the arrow indicating, and if I put my pen down there, it's right there. So, for purposes of reference, again, here's Cedar Rapids, here's Des Moines.

90

00:17:53.390 --> 00:18:03.690

Steven Spangler: This is Interstate 80 cutting across here. Here's, Federal Highway 30 and Federal Highway 20. So it's, north and west of Des Moines.

91

00:18:03.770 --> 00:18:19.379

Steven Spangler: Now, the White Rock Conservancy is a fantastic place. It's a private, essentially, nature preserve. It's, I think it's 5,500 acres, which is really large for Iowa. I think that's bigger than any of the state parks.

92

00:18:19.380 --> 00:18:29.859

Steven Spangler: And it was essentially a bequest of the Garst family, who came from Coon Rapids, and Roswell Garst, about 100 years ago, set up the,

93

00:18:29.930 --> 00:18:33.489

# Dark Sky Sites in Iowa

Steven Spangler: Garst Seed Corn Company there.

94

00:18:33.600 --> 00:18:46.470

Steven Spangler: And, so this is the location of every year for at least the last 25 years, they've had the Iowa Star Party there, which is an event that I'd really strongly encourage everybody to go to.

95

00:18:46.470 --> 00:18:53.720

Steven Spangler: And, last August, we had several, members of the Cedar Amateur Astronomers, went out there.

96

00:18:54.240 --> 00:19:07.329

Steven Spangler: Alright, so here is the Bordel Index map of the White Rock Conservancy. So what this is, it turns out on this map, is Guthrie Center, which is the county seat of Guthrie County.

97

00:19:07.520 --> 00:19:27.120

Steven Spangler: And, this is Coon Rapids itself, and the White Rock Conservancy is right next to Coon Rapids. Now, Coon Rapids isn't very big. It has a population of 1,400, so it doesn't produce a lot of light pollution. It produces some. But where the, Star, Star Party is, is way at the back of the,

98

00:19:27.150 --> 00:19:35.449

Steven Spangler: Conservancy, which is probably a good 5 miles from, Coon Rapids. And this is the location, and here this, this,

99

00:19:35.640 --> 00:19:42.640

Steven Spangler: This, website gives that as a Border Class 4.1. So that's what it's saying for that.

100

00:19:42.950 --> 00:19:51.850

Steven Spangler: So, it describes this as a rural to suburban transition, 4.1. Light pollution domes visible in several directions.

101

00:19:51.930 --> 00:20:07.769

Steven Spangler: Milky Way is still visible, but lacks detail. That's too extreme for this site. I was, in fact, just this last year, just knocked over by all the detail I could see in the Milky Way from this Starfield site at the back there.

102

00:20:07.770 --> 00:20:25.960

Steven Spangler: So, like I say, my experience has been that this number is useful because it gives you some indication of what's going on, but I

# Dark Sky Sites in Iowa

think it's an overestimate. I think you drop it by, I think about one portal class for this case, for the White Rock Conservancy.

103

00:20:26.650 --> 00:20:43.029

Steven Spangler: Now, here's a picture of, from the 1920, or the 2023, and one that... I haven't been around that quite that long. 2023 Iowa Star Party, of a picture taken from the star field, obviously, pointing south.

104

00:20:43.150 --> 00:20:58.930

Steven Spangler: And here you can see the people have their various RVs or, campers set up. That's mine right there. And that shows the picture of the sky in the background. You recognize the Milky Way and the constellation.

105

00:20:58.960 --> 00:21:13.019

Steven Spangler: Scorpius and Sagittarius. Now, you might be tempted to think, well, sure, that's a picture somebody took. It doesn't really look like that with the naked eye, but it does. I think that this really conveys what you can see

106

00:21:13.020 --> 00:21:26.010

Steven Spangler: with the naked eye from that site when it's, when it's clear... quite clear as it was all three nights then in 2023. And so, I think that's worth driving,

107

00:21:26.360 --> 00:21:29.029

Steven Spangler: You know, sort of across the state to see.

108

00:21:29.050 --> 00:21:44.329

Steven Spangler: If you live in Cedar Rapids, it's actually an easy drive, because you just get on Highway 30, and just keep rolling west until you get somewhere in the vicinity of Jefferson, Iowa, and then you go down about probably 10 miles to...

109

00:21:44.330 --> 00:21:51.210

Steven Spangler: Highway 141 and go over. Luke Christen, who lives somewhere around the observatory, did exactly that.

110

00:21:51.210 --> 00:22:00.649

Steven Spangler: I took a sort of a more southerly route, and I decided not to subject myself to driving on Interstate 80, and it took me somewhat longer.

111

00:22:00.780 --> 00:22:06.759

# Dark Sky Sites in Iowa

Steven Spangler: But Luke, made a pretty good time, going over there, just on Highway 30.

112

00:22:07.030 --> 00:22:24.839

Steven Spangler: Now, one of the things I think if you're gonna go, go out to one of these sites, and maybe camp or sit in a cabin, you'd like to have someplace that was really nice, even if it's cloudy. And, the White Rock Conservancy is absolutely beautiful. This is a picture of the star field.

113

00:22:25.210 --> 00:22:37.169

Steven Spangler: This is, again, during the 2023 event, and the way this is set up, it's the people will come out there with either their tents or their RVs, sort of relatively small RVs.

114

00:22:37.170 --> 00:22:48.640

Steven Spangler: and park them kind of like the old wagon trains used to circle the wagons and unload their equipment out on this, this big field. That's what the star field is, literally a field.

115

00:22:48.780 --> 00:23:02.859

Steven Spangler: And, the White Rock Conservancy allows us to do that. Normally, you can't do... just put an RV out there on the field. There are campsites all around this field, and you can, you can rent those and stay there.

116

00:23:02.860 --> 00:23:12.590

Steven Spangler: But it's just a beautiful site, so even if it was completely cloudy, you'd have a wonderful time taking nature walks and looking at some of the geological formations and so on.

117

00:23:12.670 --> 00:23:15.410

Steven Spangler: So that's the White Rock Conservancy.

118

00:23:15.780 --> 00:23:33.020

Steven Spangler: Now, site number two, and again, I just stress, this is completely my anecdotal way of, of, organizing these things, but I think it's, I will stand by it, is one that I think people have heard me talk about, which is Lake Darling State Park.

119

00:23:33.120 --> 00:23:51.929

Steven Spangler: which is in Brighton, Iowa. And so the location of that is right here, if you look on the Iowa DOT map, just a little bit north of that's Highway 1 there, is a little blue blob, and that's Lake Darling, named after Ding Darling, who is an early pioneer in conservation.

# Dark Sky Sites in Iowa

120

00:23:51.930 --> 00:23:59.089

Steven Spangler: And you can see that's a lot closer to Cedar Rapids. In fact, if we're having this talk out at the, at the observatory.

121

00:23:59.150 --> 00:24:16.789

Steven Spangler: If you really wanted to go there, you could drive down Ivanhoe Road and pick up Highway 1, if you'd be going east, and just keep on it going south, and probably about 2 hours later, you'd go right by the front gate of Lake Darling State Park.

122

00:24:16.840 --> 00:24:25.669

Steven Spangler: Now, what you would do at midnight there, if you had... in the middle of January... well, there are cabins. If you'd reserved that, you could have stayed there.

123

00:24:27.270 --> 00:24:41.270

Steven Spangler: So, this is one that, that I've enjoyed for many years, and so it's, again, it's a great place to visit, even without, without astronomy, but astronomy makes a, a, a big part of it.

124

00:24:41.620 --> 00:24:55.340

Steven Spangler: The, here is a picture of it, just showing. The lake itself is, I think, 600 acres, so it's a really big lake. It's like almost all lakes in Iowa, in southern Iowa. It's a man-made lake.

125

00:24:55.640 --> 00:25:10.730

Steven Spangler: But there's a trail that goes completely around it, and this shows in the east end of the, of the lake. Here is a part of that trail and a very nice bridge. There's a beautiful area off to the right here. It's an oak grove off to the right of this picture.

126

00:25:10.730 --> 00:25:21.890

Steven Spangler: So again, there's plenty of things to do there during the day. I bring these things up because I've never been to the... I've heard, people recommend the Nebraska Star Party.

127

00:25:22.060 --> 00:25:32.309

Steven Spangler: And, some... and it's supposed to be really a dark... I think that is supposed to be Bortle Class 1. They say you really should go there. It's a very large event, a lot of people go to there.

128

00:25:32.430 --> 00:25:37.499

Steven Spangler: But I've heard people say that it's usually in July or August.

# Dark Sky Sites in Iowa

129

00:25:37.520 --> 00:25:53.770

Steven Spangler: In west central Nebraska, the temperatures get up to about 100 degrees, and there are horrendous thunderstorms pretty frequently. So, it may be fantastic astronomy, but it's a lot further away than any of the places I'm talking about.

130

00:25:53.770 --> 00:26:02.539

Steven Spangler: And I don't think it has a lot of the natural beauty of these, although I've never been there, so I better somewhat reserve my opinion.

131

00:26:03.420 --> 00:26:09.330

Steven Spangler: Now, here is a, one of these, again, one of these maps of,

132

00:26:09.490 --> 00:26:25.640

Steven Spangler: the Lake Darling area, and it's kind of like in a sweet spot down here, because like I say, if you remember the initial map, almost all the northern two-thirds of Iowa is not really all that great, and but this is kind of relatively dark, so...

133

00:26:25.640 --> 00:26:29.720

Steven Spangler: This blob down here is the city of Fairfield.

134

00:26:29.720 --> 00:26:43.999

Steven Spangler: And the blob here at the top of the light pollution is the city of Washington. And so, I don't know, I think this is a place called Rubio, but it's kind of... it doesn't amount to much, but this little thing here is actually Lake Darling.

135

00:26:44.050 --> 00:26:55.169

Steven Spangler: And so, if I put this indicator here, it comes out with border class 4.1, which... that would seem to indicate it's the same as the White Rock Conservancy.

136

00:26:55.210 --> 00:27:10.160

Steven Spangler: My overall impression is the Lake Darling's slightly better than White Rock, and the reason is that White Rock is a fantastic place, but it's about 65 miles from Des Moines, it's west of Des Moines.

137

00:27:10.160 --> 00:27:20.549

Steven Spangler: So, it's the, west, west Des Moines and the western suburbs of Des Moines are closer to it, and you can see the effect of there.

# Dark Sky Sites in Iowa

138

00:27:20.600 --> 00:27:30.719

Steven Spangler: And once again, I think this 4.1 is a substantial overestimate. I've seen, again, spectacular detail.

139

00:27:30.760 --> 00:27:41.970

Steven Spangler: In the Milky Way from that site. And I've had a lot more experience. I spent a lot of time through the years camping there, and they had some very, very clear nights.

140

00:27:42.140 --> 00:27:48.580

Steven Spangler: But, like I say, I think it's a little bit better than that. Again, probably about one Bortle class would be my rough estimate.

141

00:27:49.020 --> 00:27:51.330

Steven Spangler: Now, the,

142

00:27:51.710 --> 00:28:05.929

Steven Spangler: the, some of the aspects of astronomy I'd mention is I... I started out at the beginning saying that, this BBC article said one of the reasons for going to these 10 places, like in Zimbabwe and,

143

00:28:06.050 --> 00:28:15.420

Steven Spangler: And, so on, or that you can see the zodiacal light. I've seen the zodiacal light numerous times from, from Lake Darling.

144

00:28:15.430 --> 00:28:28.409

Steven Spangler: It's best to do... the best time to do it is in September or October, before dawn. And it also would be in after sunset in March. It turns out

145

00:28:28.410 --> 00:28:47.640

Steven Spangler: The ecliptic makes a large angle with respect to the horizon at that time... at those times of year, so it gets it away from the kind of the light near the horizon. So this is a picture... this is... looks like more of a rural scene we're used to here in Iowa. This picture was actually taken in Illinois.

146

00:28:47.640 --> 00:28:56.259

Steven Spangler: And here again, you can see this kind of conical-shaped light going up along the, the plane of the ecliptic, or the zodiac.

147

00:28:56.260 --> 00:29:10.880

# Dark Sky Sites in Iowa

Steven Spangler: Now, what that's due to is the general belief is it's comet dust, as the comets sort of flake off or mold as they go around in their orbits, and they leave little pieces of particles behind.

148

00:29:10.880 --> 00:29:16.910

Steven Spangler: And those ends scatter the sunlight, and that's, that's what causes this. So it's a reflected sunlight.

149

00:29:17.170 --> 00:29:21.829

Steven Spangler: Over, little pieces, that the comments left behind.

150

00:29:22.030 --> 00:29:36.829

Steven Spangler: And, it's a set of comets called the Jupiter family comets, which, have orbits in the plane of the ecliptic, because that's... it is confined to the plane of the ecliptic, so whatever produced it is in the ecliptic as well.

151

00:29:36.830 --> 00:29:48.069

Steven Spangler: So I've seen the zodiacal light numerous times. In fact, if you pick the right time of year, get out your issue with sky and telescope, and see when it's recommending to you to go and try and see it.

152

00:29:48.150 --> 00:29:52.769

Steven Spangler: If you go down to Lake Darling, and it's clear, you're almost guaranteed to see it.

153

00:29:52.810 --> 00:30:08.520

Steven Spangler: I saw Uranus as a naked-eye object 2 years in a row. This was getting on not quite 10 years ago, and I had... my eyes were 10 years younger. I suppose I could see it now, but I was pretty certain I could, and so that gets up to magnitude 5.8.

154

00:30:08.520 --> 00:30:13.569

Steven Spangler: I think somebody with younger eyes and those same sky conditions could have seen a lot more.

155

00:30:13.600 --> 00:30:31.720

Steven Spangler: But I also saw other deep sky objects I never imagined you could see with the naked eye down there. And this also carries over to the binocular and small telescope observations. I've taken my little 3.5 inch refractor down there, you know, a few times.

156

00:30:31.730 --> 00:30:41.550

# Dark Sky Sites in Iowa

Steven Spangler: And I'm just stunned by how much more I see there than I do from my backyard, which is kind of like a residential area, urban area.

157

00:30:41.660 --> 00:30:50.650

Steven Spangler: Another thing with the Lake Darling is that the, the park rangers are on board. There are a number of... with, trying to control light pollution.

158

00:30:50.650 --> 00:31:03.609

Steven Spangler: There are a number of measures they've adapted that are recommended, like having covers on some of the lights at the restrooms, using lower wattage, and sort of what I call the warmer colors, so a lot of the... they're aware of that.

159

00:31:03.610 --> 00:31:13.999

Steven Spangler: And are attempting to implement it. There are a lot of... there are some places that, I think are good dark sky sites, but where, clearly the park management isn't... isn't aware of that.

160

00:31:14.940 --> 00:31:28.680

Steven Spangler: Okay, so that's Lake Darling State Park, and I might mention they have an extensive set of cabins at, Lake Darling. White Rock does as well, so I just kind of emphasize that if you're,

161

00:31:28.680 --> 00:31:38.860

Steven Spangler: If you don't want to camp, or either in a... if you don't have an RV, or you don't want to do tent camping, Lake Darling and White Rock have cabins that you can rent.

162

00:31:39.380 --> 00:31:59.019

Steven Spangler: Okay, number 3 on my list is the Yellow River State Forest in McGregor, Iowa, and more specifically, the Big Paint Creek Campground. Now, I indicate this on this map right here. It's right up there. That's the Yellow River State Forest. It's up in extreme northeast.

163

00:31:59.330 --> 00:32:02.240

Steven Spangler: Iowa.

164

00:32:02.550 --> 00:32:20.569

Steven Spangler: Our club member, Carl, now lives up in Alameda County, and it's sort of odd that it's a real good site in some ways, because it isn't that far from Prairie du Chien, Wisconsin, if you're familiar with the McGregor. I think it's actually probably closer to Marquette, Iowa, than McGregor.

# Dark Sky Sites in Iowa

165

00:32:20.570 --> 00:32:26.190

Steven Spangler: And again, this is probably a little bit closer than, then,

166

00:32:26.880 --> 00:32:37.249

Steven Spangler: Coon Rapids is. It's a delightful drive going up there, it's really quite beautiful. But let me talk a little bit more about the Yellow River State Forest.

167

00:32:37.460 --> 00:32:48.890

Steven Spangler: Now, it's a spectacularly beautiful place to go. Again, I think it's good to pick out places that you'd enjoy going to, and this is one of them. This is a picture

168

00:32:48.890 --> 00:32:58.880

Steven Spangler: This creek that you see here is the big main creek, and this is a picture of a... from a bluff overlooking it. You don't see that kind of,

169

00:32:59.090 --> 00:33:10.149

Steven Spangler: change in elevation here in Iowa very much, and very often, and the... the campground is over here somewhere. So I think that one of the reasons it's,

170

00:33:10.570 --> 00:33:12.130

Steven Spangler: It's,

171

00:33:12.310 --> 00:33:26.929

Steven Spangler: Good is that some of the light pollution is blocked by the hills around it. So this big Paint Creek campground is down with actually fairly substantial hills blocking the horizon, essentially in every direction.

172

00:33:27.450 --> 00:33:33.460

Steven Spangler: The other, sort of, real advantage of this is that if you're into geology at all, there are

173

00:33:34.500 --> 00:33:50.479

Steven Spangler: It's a very, well-developed, formation from the so-called Ordovician period, geological period, which is, like, I think roughly from about 450 to 500 million years ago. So that's about 100 million years before.

174

# Dark Sky Sites in Iowa

00:33:50.540 --> 00:34:08.470

Steven Spangler: the limestone formations we have around here in Iowa City and Cedar Rapids. And in fact, this bluff is composed of what are called stromatolites, which were algal mats that were in the ocean at that time. This was all below sea.

175

00:34:08.530 --> 00:34:26.029

Steven Spangler: And it's incredible to see these things, so it's kind of a, it's really a treat in geology as well. And this map on the side shows it's a bedrock geological map of Iowa, and I think these are the Devonian period, and I think this is Silurian.

176

00:34:26.030 --> 00:34:29.579

Steven Spangler: You get into Ordovician, over here.

177

00:34:29.590 --> 00:34:34.610

Steven Spangler: So, it's very interesting from a geological standpoint.

178

00:34:34.760 --> 00:34:50.209

Steven Spangler: Now, here's another thing, another reason for the fame of the Yellow River State Forest, as I learned when I went up there, is it's a hotspot of Bigfoot sightings. This is, there is an advertisement for this on the road out there, and

179

00:34:50.239 --> 00:35:09.420

Steven Spangler: But, I was... I was talking in Iowa City once with a young woman that came from Lansing, Iowa, and she said, I think there was a TV show on Animal Planet where this was sighted, this Yellow River State Forest, as a place where there were many Bigfoot sightings.

180

00:35:09.490 --> 00:35:25.210

Steven Spangler: Now, I decided that, I'm gonna give another talk, maybe I'll give the March one. Chris was saying we, we don't have a topic yet, and I was thinking of doing that, Bigfoot sightings in Yellow River State Forest as the, as the subject of that presentation.

181

00:35:25.280 --> 00:35:44.799

Steven Spangler: Now, you know, it all sounds pretty ridiculous, but I will say, it's good... it's very good for astronomy, and so when you get up at 2 o'clock in the morning when I got out of my camper to go walking around in this... in this campground, it's really dark, and then these, these things about Bigfoot...

182

00:35:44.920 --> 00:35:58.630

Steven Spangler: sightings begin to give you the creeps, actually. I mean, it's sort of ridiculous to admit that, but if you go up there, why

# Dark Sky Sites in Iowa

don't you think about that, if you, sort of out there, think about the Bigfoots while you're out there.

183

00:35:58.910 --> 00:35:59.840

Steven Spangler: Alright.

184

00:36:00.160 --> 00:36:05.330

Steven Spangler: So, there are a number of great aspects of the Yellow River State for us, in addition to

185

00:36:05.730 --> 00:36:12.570

Steven Spangler: The, the fact that it, again, comes in at about the same as far as these, when you, you use that.

186

00:36:12.700 --> 00:36:25.440

Steven Spangler: website, it comes in at about 4.1. But the nice aspects of Yellow River State Forest, it's an absolutely beautiful location. There's fantastic geology and ornithology, if you're into birding.

187

00:36:25.630 --> 00:36:38.050

Steven Spangler: It turns out there are some, old-growth, forests around there. That's, I guess, one of the reasons why they established this, and so there are a number of birds that really have set that up as their,

188

00:36:38.420 --> 00:36:47.520

Steven Spangler: As their main habitat. One is called the Cherulean Warbler, which is a sort of a vivid blue bird, and I was able to see that.

189

00:36:47.960 --> 00:37:07.339

Steven Spangler: One of the real advantages, the park ranger there is totally on board for dark sky protection. I went and talked to him. His name is Bruce Blair, and he was in the process of trying to get that location set up as a so-called dark sky sanctuary. There's the International Dark Sky

190

00:37:07.410 --> 00:37:26.459

Steven Spangler: organization has a number of different, sort of protected areas for dark sky, and he's trying to get that specified as one of them. And evidently, there's an active amateur group in the area that... I think there may actually be an observatory on the state park site that's in on that.

191

00:37:26.600 --> 00:37:39.010

# Dark Sky Sites in Iowa

Steven Spangler: So, he was telling me he's actually removed a lot of the security lights, from the park because he didn't think they were serving any good purpose. So that, that's, that's very good as well.

192

00:37:39.170 --> 00:37:56.800

Steven Spangler: The Big Paint Creek Campground is absolutely beautiful. Now, it's non-electric. You can... there's a couple of sites where you can get RVs down in there, but there... but there's no hookup, and you gotta go a ways for water. And there isn't, what they call modern plumbing there. There's an outhouse.

193

00:37:56.860 --> 00:38:14.409

Steven Spangler: But still, I think it's, it's worth, worth going there. And in a slight ways away from this big paint, big paint creek campground is there are a number of cabins that you can rent as well. So, that's a, that's another really good one.

194

00:38:15.260 --> 00:38:25.889

Steven Spangler: All right, now, this could get, sort of boring, so I think I'm gonna just kind of abbreviate, the discussions of some of the other ones on my list. These are,

195

00:38:25.890 --> 00:38:35.799

Steven Spangler: Other good sites I have first-hand information on, a lot closer than any of the other ones. Central Park, that's Jones County Conservation.

196

00:38:35.900 --> 00:38:48.749

Steven Spangler: Which, it says here, Monticello, Iowa. It's actually about 10 miles south of Monticello. Now, Chris, I think you said once you went up there and you weren't so impressed that it was all that great, but did you remember anything about that?

197

00:38:51.360 --> 00:38:56.669

Chris Kardos: Actually, that was, hearsay. I, I hadn't... Oh, okay.

198

00:38:56.670 --> 00:38:57.560

John Centala: Yeah. Well, there.

199

00:38:57.560 --> 00:39:02.649

Steven Spangler: There's a... there's a campground, they've got a beautiful campground there. They have a modern campground.

200

00:39:02.650 --> 00:39:27.100

# Dark Sky Sites in Iowa

Steven Spangler: with RVs, and those look jammed in quite a bit. And then there's a so-called primitive one that extends for quite a region, and I was up in the perimeter or the non-electric one, and I think that there may be a big difference as to which one that, that you would choose. Now, I'm pretty sure this Central Park also has, I think it has a cabin, one or... yeah, in fact, I know it does. It has a couple

201

00:39:27.100 --> 00:39:28.230

Steven Spangler: the cabins.

202

00:39:28.230 --> 00:39:36.460

Steven Spangler: right along the lake. So, again, if you either have, picked the summertime and go there and throw up a tent, or, get a,

203

00:39:36.870 --> 00:39:43.679

Steven Spangler: Get a, One of these parks, or one of these cabins.

204

00:39:44.330 --> 00:39:50.270

Steven Spangler: Now, the other one I'd mention, is, Nine Eagles State Park in Limona.

205

00:39:50.320 --> 00:40:02.309

Steven Spangler: Iowa, and I've had experience... I've camped there a number of times. It's actually when I was transiting. Our son and his family lived in Houston, and we would take a camping trip down there.

206

00:40:02.310 --> 00:40:12.879

Steven Spangler: And we get out, get going, and about the time to quit the first day we get a late start was around Lamona, and this Nine Eagle State Park was there.

207

00:40:13.250 --> 00:40:28.929

Steven Spangler: Now, I think it has extremely good skies, and in fact, if you... if you run that tool, it runs, instead of 4.1, which all of the other sites I've had, that I've described tonight, have.

208

00:40:29.060 --> 00:40:41.949

Steven Spangler: It has, like, 3.7, so it's about, according to that, that algorithm, it's about 4 tenths of a border class darker than, than the other 3 sites I mentioned. And...

209

00:40:41.950 --> 00:40:51.569

Steven Spangler: And based on my experience there, I can believe it, it's really in a very remote place. In fact, the first time we stopped there, we got a late start, and it came arrived there.

# Dark Sky Sites in Iowa

210

00:40:51.690 --> 00:41:04.510

Steven Spangler: We were arriving there about, 11 o'clock, 11.30, and we were coming down this, this highway, and I was thinking, boy, there's nothing much around here. And then there's a sign.

211

00:41:04.510 --> 00:41:11.929

Steven Spangler: that says, Nine Eagles State Park. And then there's another sign that said, Pleasanton, 5 miles.

212

00:41:11.940 --> 00:41:22.469

Steven Spangler: And I thought, does this mean this place I'm going to is 5 miles more remote than where I am right now? And it is, but it's, again, a beautiful place.

213

00:41:22.590 --> 00:41:32.510

Steven Spangler: So I'm probably next summer gonna try and make a, an expedition down there to just check it out, check it out more.

214

00:41:32.510 --> 00:41:55.999

Steven Spangler: Because if you go back to... I might, if I have time, go back to the original picture. It is in about the darkest spot that you'll find in Iowa. It's right on the... it's way down the lower part of the southern counties. In fact, I think from the, from the gate to Nine Eagle State Park, you can actually see Missouri off in the distance.

215

00:41:56.230 --> 00:42:09.690

Steven Spangler: A slight disadvantage is that the main campground, has a, it has a security light that is not good for observing the sky, but I might actually try and go talk to the ranger about...

216

00:42:09.850 --> 00:42:27.540

Steven Spangler: doing something about that if I, if I, actually get down there. Now, again, the low-tech way is to take a map of Iowa, find a state or county park 60 miles from a big city and check it out. Now, there are a lot of... I mentioned mainly the,

217

00:42:27.720 --> 00:42:36.170

Steven Spangler: state parks, but there's a lot of county parks in Iowa that are really nice. This, Central Park in Jones County is an example of it as well.

218

00:42:36.620 --> 00:42:54.279

Steven Spangler: Okay, the final thing I'd like to say is that in conserve, both for conserving, you know, helping out with, with, light

# Dark Sky Sites in Iowa

pollution, say, at the observatory and the places we live, or at these, at these special kind of, dark sky sites.

219

00:42:54.280 --> 00:43:00.189

Steven Spangler: is I think we need to let the Iowa DNR and county conservation, boards

220

00:43:00.190 --> 00:43:17.650

Steven Spangler: know how important dark skies are to us, and this is a picture I really like. You usually tend to think of Texas as being a pretty conservative state that would want to let, you know, business run the way it wanted to, and not impede people's freedoms, and so on.

221

00:43:17.650 --> 00:43:31.190

Steven Spangler: But they have a great set of state parks down, really an excellent set of state parks. I was very impressed with it. And they feature a lot of astronomical themes. They have a lot of events associated with dark skies.

222

00:43:31.270 --> 00:43:49.309

Steven Spangler: And on the, the little electric hook ends, water and electric hook ends in Texas state parks, they have these, this, sticker on it, which I think is so great. It says, lights out, stars on. Dark starry skies are beautiful and important for wildlife.

223

00:43:49.310 --> 00:43:53.350

Steven Spangler: Please turn off lights in your campsite at bedtime. Now.

224

00:43:53.350 --> 00:44:01.749

Steven Spangler: I think there were a lot of people in those state parks that decided, like hell, you know, they didn't do it, but at least they're... at least they're making a,

225

00:44:01.760 --> 00:44:19.939

Steven Spangler: making an effort. So, at any rate, that sums up my, my talk. So, I think if anyone, like I say, it's not like answering a question in a real science presentation, but I think if anyone wants to, say, add in what their experience has been, or

226

00:44:19.940 --> 00:44:24.989

Steven Spangler: Or, to bring up some, some point. we could have a little bit of,

227

00:44:24.990 --> 00:44:27.780

Steven Spangler: discussion or dialogue at this point. I'm sure

# Dark Sky Sites in Iowa

228

00:44:27.780 --> 00:44:37.889

Steven Spangler: There are a lot of people who have had experience here in various places in Iowa, dark sky sites here in Iowa that might want to contribute to this. So, thanks.

229

00:44:40.020 --> 00:44:40.610

John Centala: Okay.

230

00:44:40.610 --> 00:44:47.659

Chris Kardos: Thank you, Steve. I think people should be able to unmute themselves if you have a question or a comment.

231

00:44:47.950 --> 00:44:53.029

Chris Kardos: Somebody try, and if you have trouble, let us know in the chat.

232

00:44:53.200 --> 00:45:08.120

John Centala: I have a comment on Central Park. Yeah. Some members of our club in the past have done programs there and taken telescopes. Oh, really? Okay. Good. Yeah, we used to hang out there.

233

00:45:08.380 --> 00:45:13.009

Steven Spangler: Well, thanks, John. I didn't know that. I mean, I sort of went there, and

234

00:45:13.340 --> 00:45:32.939

Steven Spangler: I camped there a couple times, and was amazed at how good it was. Again, I was in sort of back in the... there's a beautiful grove, and it's a big grassy area, and that's where I was, rather than the RV park, but yeah, I believe it would be really quite good.

235

00:45:33.010 --> 00:45:50.309

Steven Spangler: It's if you look off to the south and east, there's really not much out there to produce much light pollution. Now, there's... there's a farm that has a security light about a mile away that's pretty bright, but, you know, it's... you know, it's interesting you'd bring this up, because I think

236

00:45:50.410 --> 00:46:03.829

Steven Spangler: For people in the Cedar Rapids area, it's real easy to get out there. You just get on 151 and go up to Anamosa, and cut off on Highway 64, and you're there almost.

237

# Dark Sky Sites in Iowa

00:46:03.830 --> 00:46:17.090

Steven Spangler: I might... here is the... here is the indication again, this, this Nine Eagles State Park is right about here. So this is the border of, Iowa and Missouri, and it is right there.

238

00:46:17.100 --> 00:46:27.629

Steven Spangler: And it's right next to... it's not quiet in, according to this, but it's right next to a... I think, the darkest spot you'll find in Iowa, so...

239

00:46:27.820 --> 00:46:39.100

Steven Spangler: I looked to see if it was possible that there's any... any county park there, and there's not. But, at any rate, it's still... it should be very, very good, and there's... it's, like, paved roads and so...

240

00:46:39.200 --> 00:46:57.079

Steven Spangler: If you string a pair of binoculars around your neck and go walking around there, you'll have a very good experience. So again, this is, just for a point of reference, this is Des Moines right here, this is Interstate 35, this is Lamoni right here. So it's a bit of a ways from,

241

00:46:57.550 --> 00:47:07.590

Steven Spangler: from Cedar Rapids, but, so it took me about 4 hours to get there, but... but that's driving at 55 miles an hour with my... with my, camping trailer.

242

00:47:09.220 --> 00:47:27.129

John Centala: So, for the Leonids in 1998, I drove down there, because it was cloudy here, and observed... I think I was one mile over the Missouri border. Yeah. Stopped in a driveway of an abandoned farmhouse, and took pictures of the Leonids.

243

00:47:28.300 --> 00:47:38.580

Steven Spangler: So, John, did you make any kind of estimate, then, of how faint a star you could see, or objects, deep sky objects you could see, or anything like that?

244

00:47:38.860 --> 00:47:45.299

John Centala: No, because I was just mostly watching... this was the... what they call the Night of the Fireballs.

245

00:47:45.440 --> 00:47:47.060

Steven Spangler: Oh, okay. Alright.

246

# Dark Sky Sites in Iowa

00:47:47.060 --> 00:47:48.090

John Centala: Meteors.

247

00:47:48.090 --> 00:47:52.979

Steven Spangler: Alright, so you've actually been there, well, you've actually been close to there, I guess.

248

00:47:52.980 --> 00:47:53.820

John Centala: Yes.

249

00:47:53.820 --> 00:47:56.190

Steven Spangler: Did you go through this place, Pleasanton?

250

00:47:57.720 --> 00:47:58.980

John Centala: I don't recall.

251

00:47:58.980 --> 00:47:59.830

Steven Spangler: Alright.

252

00:47:59.830 --> 00:48:01.749

John Centala: I was just looking for a dark site.

253

00:48:02.090 --> 00:48:03.450

Steven Spangler: Yep, yep.

254

00:48:06.700 --> 00:48:24.529

iPad: Well, just to, spin off that observational history with John, I can't remember how many decades ago this was. It was quite some time ago, but we actually saw the zodiacal light from our Eastern Iowa Observatory, in October.

255

00:48:25.510 --> 00:48:28.099

iPad: I don't know that you could see that now.

256

00:48:28.610 --> 00:48:37.420

Steven Spangler: Well, you know, Norma, I had seen, with John Leeson, one time, we saw it in March.

257

00:48:37.420 --> 00:48:51.389

Steven Spangler: in the west, and I was... it wasn't very prominent, but you could act... I thought you could see it, and I was surprised at that, because from the, from the Paldows, when you look west, you're looking...

# Dark Sky Sites in Iowa

258

00:48:51.520 --> 00:49:02.439

Steven Spangler: over the part of the corridor and so on. Whereas if you were seeing it in, so you said you were seeing it in March or September?

259

00:49:02.440 --> 00:49:04.010

iPad: Was October.

260

00:49:04.210 --> 00:49:04.950

Steven Spangler: October.

261

00:49:04.950 --> 00:49:06.569

iPad: People don't. Yeah.

262

00:49:06.570 --> 00:49:11.470

Steven Spangler: seeing it in October, you're looking to the east, and I could believe... I could believe that, okay?

263

00:49:11.470 --> 00:49:21.279

iPad: Yeah, it was way before the dome of light pollution was as bad as it is now. So it's just kind of a study in how much things have changed, yeah.

264

00:49:21.280 --> 00:49:27.610

Steven Spangler: Well, it's a kind of an indication, I'll say, the one time I saw it with John Leeson there was in March,

265

00:49:27.980 --> 00:49:30.200

Steven Spangler: It was a kind of thing where,

266

00:49:31.550 --> 00:49:50.700

Steven Spangler: You could see it, but it didn't stand out at you. The times I've been both at Lake Darling and at White Rock once in October, September, it jumped out at you. In other words, if you didn't... if you hadn't been looking for it.

267

00:49:51.050 --> 00:50:10.769

Steven Spangler: you would have said, what's that? So it was, it was really, it was really quite, quite prominent there. So it makes a big... I think that, again, the, the, Eastern Iowa Observatory is a fantastic facility, but there, there are sites that you can go to in Iowa that are significantly better.

268

00:50:13.430 --> 00:50:14.540

# Dark Sky Sites in Iowa

Chris Kardos: So, boycan...

269

00:50:14.540 --> 00:50:22.570

John Centala: I saw the zodiacal light from Paldows, I think it was late September. We were out there all night till dawn.

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00:50:22.570 --> 00:50:24.609

Steven Spangler: Yeah, you have to do it at the disadvant.

271

00:50:24.610 --> 00:50:25.040

iPad: Yeah.

272

00:50:25.040 --> 00:50:35.029

Steven Spangler: September is you got... I thought that the Linn County deputy would haul you off if you were in there after 4.30 in the morning, John.

273

00:50:37.370 --> 00:50:45.629

Steven Spangler: But, yeah, you have to... you have to be there at dawn, and my understanding is that there's no camping in there, is that right?

274

00:50:45.880 --> 00:50:46.630

John Centala: Right?

275

00:50:46.630 --> 00:50:47.150

Steven Spangler: Right.

276

00:50:52.750 --> 00:50:59.659

Chris Kardos: So I was gonna comment, for those of you who live in the Cedar Rapids area, and we're here for the derecho.

277

00:50:59.980 --> 00:51:15.100

Chris Kardos: for those 4 or 5 or 6 nights, I don't know how long it actually was, when there was, basically no power to most of the whole city and Marion and everything else, the skies were incredible. I don't know what they were, but they were probably Portal 2.

278

00:51:15.550 --> 00:51:19.199

Steven Spangler: Yeah, yeah, that would do it. That would do it.

279

00:51:19.200 --> 00:51:24.549

Chris Kardos: Maybe we can hope the Chinese hack our grid and shut us down for a while.

# Dark Sky Sites in Iowa

280

00:51:28.180 --> 00:51:37.080

Steven Spangler: I'd be interested in, if anyone here has been to the Nebraska Star Party, because, I mean, it really is famous, and

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00:51:37.080 --> 00:51:52.109

Steven Spangler: a lot of the, quite a few of the people that went to the Iowa Star Party have, gone to that, and I've heard a couple people say, you should really go to it at least once. But I think, has anyone been there, and do you have a...

282

00:51:52.120 --> 00:52:00.080

Steven Spangler: Do the dark skies outweigh the 100 degree heat and the, and the, Thunderstorms.

283

00:52:00.530 --> 00:52:08.570

John Centala: Yes, I've been there once, and so there's a lake, a Merritt Reservoir, right by... right nearby.

284

00:52:08.790 --> 00:52:13.590

John Centala: So you gotta be... you gotta plan to spend time in the lake during the day.

285

00:52:14.040 --> 00:52:15.620

Steven Spangler: Okay. Alright.

286

00:52:16.880 --> 00:52:30.180

iPad: I have not been to the Star Party itself, but last September, I rented an Airbnb south of, Merritt Lake, not too far away, and the skies are indeed incredible.

287

00:52:30.710 --> 00:52:31.640

Steven Spangler: Yeah, yeah.

288

00:52:31.640 --> 00:52:33.289

iPad: Yeah, they really were.

289

00:52:33.540 --> 00:52:39.620

Steven Spangler: I think it... I think this is a case that I read that those are Bortle Class 1, and somebody...

290

00:52:40.900 --> 00:52:53.829

# Dark Sky Sites in Iowa

Steven Spangler: A long time ago, when we lived in New Mexico, we would go camping up in mountains in western New Mexico, and I remember, thinking, boy, this guy's really good here.

291

00:52:53.830 --> 00:53:03.839

Steven Spangler: But I... I... I was... I guess I was being less systematic than I am now in checking these things out, so I'm... I'm sure those are Border Class 1, but... but...

292

00:53:03.950 --> 00:53:10.339

Steven Spangler: Again, I wasn't paying close enough attention, but it really was, was stunning.

293

00:53:10.560 --> 00:53:17.720

Steven Spangler: But, the, central Nebraska's a lot closer than, say, New Mexico or someplace like that.

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00:53:19.860 --> 00:53:21.829

AlanE: Steve, I have a couple of comments.

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00:53:21.870 --> 00:53:39.939

AlanE: First of all, I see that in the chat, there's a link to the article, on where the Bortle... written by Bordel, it's the original article, so that link is... That's the Sky and Telescope one. Correct, and that's in the chat if anybody's interested in looking at that.

296

00:53:39.970 --> 00:53:50.940

AlanE: And my second comment is, I think you said that the ratings, at least when you go in this app, are looking at the missions from the Earth as seen by telescopes, is that right?

297

00:53:50.940 --> 00:53:55.859

Steven Spangler: No, this map that's, like, right on the screen right now is what I've been using.

298

00:53:55.990 --> 00:54:04.300

Steven Spangler: And these are from satellite pictures, okay? I mean, because you can see it's got, it's got a value for every point.

299

00:54:04.450 --> 00:54:23.789

Steven Spangler: Whereas if you were doing this from the ground, you'd have to go out and have somebody who was experienced on this and had good eyeballs doing the measurements on this. So this is using satellite pictures. So the satellites are seeing the light that's coming up from the Earth and on its way to space, alright?

# Dark Sky Sites in Iowa

300

00:54:24.010 --> 00:54:39.390

Steven Spangler: In some sense, when we are... when we're doing astronomy on the ground, we're on the ground looking up, and so we're... we're only interested in the part that gets scattered back down, okay? So it's... you know, you can do estimates of relating

301

00:54:39.680 --> 00:54:42.859

Steven Spangler: The picture that generated this...

302

00:54:43.010 --> 00:54:52.499

Steven Spangler: to this, but I think it's not going to be one-to-one. In fact, I've read some things in Sky and Telescope saying there are,

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00:54:52.860 --> 00:54:56.409

Steven Spangler: You know, some of the... some of the difficulties associated with that.

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00:54:56.790 --> 00:55:09.780

AlanE: Yeah, that's what I was looking at, is, I could see, for example, if you were in an area that had a mountain and there was some light, it would appear that there's light in an area, but if the mountain shields you from that light, you might be better than what the rating could be.

305

00:55:09.780 --> 00:55:10.980

Steven Spangler: Absolutely.

306

00:55:11.120 --> 00:55:25.629

AlanE: Another article I saw just looking through here is that it also depends on the kind of emission. Some of the street lights have certain emissions, you know, the sodium lights you can filter out better than other... some of the LEDs are broader spectrum, and so pollution is,

307

00:55:25.830 --> 00:55:28.059

AlanE: I'll just say it's different than it used to be.

308

00:55:28.340 --> 00:55:44.719

Steven Spangler: It is, and I think it's gotten worse, and one of the things is the LEDs produce a lot of, blue and, you know, blue and whitish light, which is particularly bad. It scatters more, for one thing.

309

00:55:44.720 --> 00:55:50.069

Steven Spangler: So, it definitely depends on... on the spectrum of the light that's being used.

# Dark Sky Sites in Iowa

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00:55:50.290 --> 00:55:58.609

Steven Spangler: And that's... there was this... There's this DarkSky.org is the, the international,

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00:55:59.220 --> 00:56:06.630

Steven Spangler: organization that's trying to control these things, and the American Astronomical Society,

312

00:56:06.780 --> 00:56:15.179

Steven Spangler: has a group within it, or a subdivision called COMPAS, which is trying to deal with mitigation of,

313

00:56:15.310 --> 00:56:32.440

Steven Spangler: of, essentially artificial emissions, you know, everywhere, radio waves and visual and so on. But of course, as amateur astronomers, what we're mainly interested in is what you see in the night sky. That's the main concern we have on this.

314

00:56:36.600 --> 00:56:37.110

AlanE: Thank you.

315

00:56:39.460 --> 00:56:46.959

Greg Frohner: On the... On the other side of the spectrum, If people can hear me.

316

00:56:47.330 --> 00:56:47.740

Chris Kardos: Yep.

317

00:56:47.740 --> 00:56:49.069

Steven Spangler: We hear you, Greg.

318

00:56:49.070 --> 00:56:57.589

Greg Frohner: Okay, the University of Iowa had this bell and blank program where they invite gifted

319

00:56:57.830 --> 00:57:00.440

Greg Frohner: Kids from various parts of the world.

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00:57:00.730 --> 00:57:06.740

Greg Frohner: And we hosted a group of them that were from Hong Kong and Guangzhou.

# Dark Sky Sites in Iowa

321

00:57:07.920 --> 00:57:11.700

Greg Frohner: There might have even been some from, Taipei.

322

00:57:12.070 --> 00:57:19.260

Greg Frohner: And we noticed that they weren't as interested looking at the... through the telescopes as they were just sitting out.

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00:57:19.360 --> 00:57:22.150

Steven Spangler: On the grounds and looking at the sky.

324

00:57:22.150 --> 00:57:25.039

Greg Frohner: And when they were queried about that, they said.

325

00:57:25.160 --> 00:57:31.700

Greg Frohner: Some of them said they had never seen stars before, and one of them said that they had never even seen the moon before.

326

00:57:31.990 --> 00:57:32.470

Steven Spangler: Mmm.

327

00:57:33.590 --> 00:57:40.130

Greg Frohner: So that, that was... You can imagine, in those cities, that's very possible.

328

00:57:40.310 --> 00:57:47.139

Steven Spangler: Well, thanks for bringing that up, Greg, because, I mean, I can relate to that, because when I was still teaching, I would bring

329

00:57:48.710 --> 00:58:02.099

Steven Spangler: groups of my students in, who are taking this, this general education class in astronomy out to the observatory. And so I'm eternally grateful to all the people that helped during that time.

330

00:58:02.370 --> 00:58:12.109

Steven Spangler: And that was a fantastic experience, because these kids weren't mostly from Hong Kong and Singapore, although I had some that were.

331

00:58:12.300 --> 00:58:17.120

Steven Spangler: But, in most cases, they had, they came from, like.

332

# Dark Sky Sites in Iowa

00:58:17.230 --> 00:58:35.679

Steven Spangler: big suburbs of Des Moines, or Cedar Rapids, or Chicago, that's, that's what a lot of the, it was. And they, they really have had limited experience with seeing the sky, particularly if they're thinking about the astronomical, you know, thinking about astronomi.

333

00:58:35.870 --> 00:58:52.020

Steven Spangler: And I brought them out on the, on school buses, and we pull up in the upper parking lot, and we get them out of the buses, and I told the drivers to turn off the lights on the buses as soon as possible.

334

00:58:52.200 --> 00:59:04.880

Steven Spangler: And when they did, there were all kinds of stunned comments from the students when they actually saw the sky, and I think that, you know, if you grew up in Chicago, in some place like, I don't know,

335

00:59:05.220 --> 00:59:19.160

Steven Spangler: Bolingbrook or something like that. You probably don't see very much in the way of stars, and so I think that the, like, the Powell Dow sky looked pretty, pretty impressive, so I can really relate to what your,

336

00:59:19.550 --> 00:59:21.140

Steven Spangler: What you're saying, and...

337

00:59:24.030 --> 00:59:28.379

AlanE: Steve, you might want to stop your sharing. We could see each other's faces better if we do that.

338

00:59:29.260 --> 00:59:31.630

Steven Spangler: Stop share. Okay, very good.

339

00:59:32.590 --> 00:59:38.360

Steven Spangler: Now, I don't know whether seeing my face is going to be an improvement or not, or we'll add anything to them.

340

00:59:38.660 --> 00:59:42.249

Steven Spangler: Well, actually, somehow this thing is still up there, but okay, that's fine.

341

00:59:44.050 --> 00:59:46.870

Steven Spangler: Yeah, we're seeing you now, we're not seeing your presentation.

# Dark Sky Sites in Iowa

342

00:59:48.630 --> 00:59:59.590

Steven Spangler: Well, I think there are a number of places it will, produce this, but the, again, if the... if the PowerPoint... I guess that the PowerPoints are archived, aren't they?

343

01:00:00.210 --> 01:00:08.830

Chris Kardos: Yeah, we do have those, and I was going to ask you, Steve, if you could either email it to me if it's not too big, or maybe bring it when we get together for the.

344

01:00:08.830 --> 01:00:17.509

Steven Spangler: Okay, well, I can email you the link, if you... would that do it? And then people can go in, because it really is... it's instructive.

345

01:00:18.610 --> 01:00:20.159

Chris Kardos: Yeah, that'd be great. Thank you.

346

01:00:20.470 --> 01:00:21.470

Steven Spangler: I'll do that.

347

01:00:23.080 --> 01:00:24.369

Michael Schmidt: Excuse me, Steve?

348

01:00:25.730 --> 01:00:26.520

Steven Spangler: Thank you.

349

01:00:26.700 --> 01:00:33.189

Michael Schmidt: I was just curious... I had read an article a few days ago, actually, about,

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01:00:33.450 --> 01:00:47.699

Michael Schmidt: fellow from Texas, I think his name was, like, James Bruton, or something like that. Yeah, yeah. I think he was doing some sort of initiative to try to improve, like, astrotourism in Iowa, or...

351

01:00:48.080 --> 01:00:50.059

James Bruton: Address the light pollution.

352

01:00:50.240 --> 01:00:51.160

James Bruton: I'm here, Michael.

353

01:00:52.120 --> 01:00:54.010

# Dark Sky Sites in Iowa

Steven Spangler: Oh, are you? Hi! I'm...

354

01:00:54.010 --> 01:00:54.440

Michael Schmidt: No, sir.

355

01:00:54.440 --> 01:01:11.100

Steven Spangler: Good to meet you. You know, this was a complete... I meant to bring... hello, James, good to meet you. You know, it's, I read the article and thought, I gotta get in touch with this guy, and I meant to mention that in my presentation, and just forgot it.

356

01:01:11.100 --> 01:01:18.250

Steven Spangler: You see, one of the advantages of being in your 70s, you can say, well, you know, at my age, you know, it just doesn't work very much, but...

357

01:01:18.250 --> 01:01:24.270

Steven Spangler: Anyway, James had... was interviewed in the Gazette, about a week ago.

358

01:01:24.490 --> 01:01:32.130

Steven Spangler: And the, this, Mackenzie Uhlenhop, who's the, the, essentially in charge of the Ames one.

359

01:01:32.130 --> 01:01:50.679

Steven Spangler: distributed a link, it wasn't to the Gazette, but I guess it came out from Iowa, but... about this, and it was just wonderful. So, James, why don't... Michael, why don't you finish your spiel, and then maybe James can give a presentation. So, I'm very sorry, thank you for bringing this up.

360

01:01:50.680 --> 01:02:02.870

Michael Schmidt: I was just curious as far as what are the efforts as far as astrotourism and light pollution control goes in Iowa, how one might address that, so on and so forth, if anything's actually

361

01:02:02.980 --> 01:02:13.369

Michael Schmidt: moving forward on that. Being in Cedar Rapids, like Chris had mentioned, the derecho, for all its terribleness, was absolutely beautiful at the night skies, and I would...

362

01:02:13.700 --> 01:02:15.359

Michael Schmidt: Love to see that again.

363

# Dark Sky Sites in Iowa

01:02:16.140 --> 01:02:19.449

Steven Spangler: James, do you want to answer that? You're the expert on this.

364

01:02:19.450 --> 01:02:39.320

James Bruton: Well, I don't know that I'm the expert on it, but I'm passionate about it, but, you know, probably not any more passionate than anyone else, you know, on this, you know, on this call are. You know, really the genesis for me is I do a lot of community development work around Iowa and around the Midwest. I'm a consultant by occupation, and

365

01:02:39.320 --> 01:02:47.259

James Bruton: I've done a lot of strategic planning for chambers of commerce and other types of organizations around the Midwest, and

366

01:02:47.260 --> 01:03:02.200

James Bruton: You know, one of the main things, you know, as I'm having conversations with rural communities, is that, you know, they want to remain relevant, they want to be able to retain the people that they have, the businesses that they have. They also want to be able to grow.

367

01:03:02.200 --> 01:03:15.000

James Bruton: You know, and specifically talking about, you know, some rural areas just west of Des Moines. I'm based in Des Moines. And, you know, these communities, they want to grow, but they also want to maintain their rural

368

01:03:15.000 --> 01:03:30.200

James Bruton: identity. And so, for me, the perspective that I'm... I have come at from this is from an economic development standpoint, and quite frankly, the reason that I'm very purposefully coming at it from that perspective is because that touches everybody.

369

01:03:30.200 --> 01:03:40.480

James Bruton: You know, unfortunately, not everybody cares about wildlife. Not everybody cares about circadian rhythms, even though they should. You know, not everybody cares about, you know, astrotourism.

370

01:03:40.480 --> 01:04:02.739

James Bruton: But everybody cares about the economy. Everybody, you know, wants, wants their community to be doing well. And so that's really where my perspective on this has come, you know, knowing that it will benefit, you know, everyone, you know, in every possible way, you know, especially everyone here on, you know, on this call. I know that it, you know, it benefits,

371

# Dark Sky Sites in Iowa

01:04:02.740 --> 01:04:05.980

James Bruton: you know, the other things that I mentioned as well.

372

01:04:05.980 --> 01:04:19.309

James Bruton: And, you know, the main reason that I, you know, really started to tackle this, and the initial article was with Iowa Capital Dispatch. They were the ones that originally did the article.

373

01:04:19.310 --> 01:04:28.650

James Bruton: And, they reached out to me because I was at the Iowa Nature Summit, in Des Moines, at Drake University, near the, near the end of...

374

01:04:28.670 --> 01:04:47.160

James Bruton: of November. And throughout that two-day event, you know, lots of conversations about clean water, about tall grass prairies around land use, things of that nature, but not one time was dark skies brought up during that conversation, until I had asked a question during a question and answer.

375

01:04:47.160 --> 01:04:58.749

James Bruton: Period. And, you know, and they were, they were happy that I, that I had asked the question, but basically said, you know, nobody's, you know, to their knowledge, nobody is doing anything, proactive about that here in Iowa.

376

01:04:58.840 --> 01:05:14.119

James Bruton: And, you know, after, you know, after the end of that session, I probably had a dozen people come up to me just saying, thank you for asking the question. You know, we know this is an important issue. Everyone else that is here, you know, it affects all of our causes, you know, from a nature standpoint.

377

01:05:14.120 --> 01:05:19.509

James Bruton: And, you know, so that's really what got me energized to do this, and being here in Des Moines.

378

01:05:19.790 --> 01:05:21.359

James Bruton: Just having some

379

01:05:21.360 --> 01:05:41.570

James Bruton: contacts that I have, some lobbyists, you know, that spend some time at the State House. You know, my hope is to, you know, be able to make a difference. You know, I know that I can't do it on my own, I'm just one person right now, but since that article came out, a number of people have reached out to me, offering to help.

# Dark Sky Sites in Iowa

380

01:05:41.570 --> 01:05:43.210

James Bruton: The reason I'm here...

381

01:05:43.510 --> 01:05:58.050

James Bruton: Today is John Leeson, who I also see us here on this call, reached out to me and said that, you know, you should, make mention of this, this conversation that we're having right now on the Dark Sky Iowa Facebook page, so I did, so I wanted to join that.

382

01:05:58.050 --> 01:06:13.130

James Bruton: And so, to come back to it, what is happening in here in Iowa right now, you know, the reason that I'm being passionate about it, the reason that, you know, I'm, you know, part of this conversation and others, is just that I haven't seen a lot of proactive work

383

01:06:13.130 --> 01:06:32.069

James Bruton: being done, you know, to raise this issue. You know, in the, I think it was either 99 or 2000, there was an Iowa legislator that tried to bring this up at the state level, and, you know, my understanding is that it never even got out of, got out of subcommittee.

384

01:06:32.150 --> 01:06:50.060

James Bruton: So really, more than anything, what I'm trying to do right now is raise awareness. Ed Fallon, who's a former Iowa legislator, he has a, podcast, it's also on radio shows called the Fallon Forum. I'm gonna be chatting with him here in a couple of weeks. Iowa Public Radio has reached out to me.

385

01:06:50.060 --> 01:07:03.829

James Bruton: I'll be talking with Charity Nebby on Talk of Iowa. Don't have an exact date on that, but again, really, what I'm trying to do right now is raise awareness and also be able to provide some resources. I've had a handful of people that have reached out to me.

386

01:07:03.830 --> 01:07:17.240

James Bruton: saying, hey, I've got, you know, this, this school that's here in Des Moines that is, you know, casting a bunch of light, you know, what can I do? So I'm providing some articles, you know, to, to, to them, someone else, I believe, that was in Marion.

387

01:07:17.240 --> 01:07:30.059

James Bruton: Wanting to, you know, how can we implement dark sky ordinance? So right now, again, trying to raise awareness and to provide resources to those that are, genuinely interested in being able to, to make a difference.

# Dark Sky Sites in Iowa

388

01:07:30.060 --> 01:07:38.420

James Bruton: And it's all just volunteer work for me right now, but it's, you know, it's, it's important. It's important to our state.

389

01:07:38.420 --> 01:08:02.010

James Bruton: We are bleeding people, you know, out of our state, and if we intend to remain relevant, I believe that we need to do everything that we can to attract people to our state and make them want to stay, and this is just one small area that has a, you know, a huge impact on our, you know, our agriculture, has a huge impact on our wildlife.

390

01:08:02.010 --> 01:08:18.659

James Bruton: And I believe has potential to have a huge impact on just how Iowa is viewed and our ability to both, retain and hopefully attract people to the state, which is, you know, important to our workforce, which again comes back to, comes back to our larger economy.

391

01:08:19.590 --> 01:08:20.210

Steven Spangler: Great.

392

01:08:22.740 --> 01:08:41.600

Steven Spangler: James, I got a couple, you know, comments. I mean, I thought it was, you know, very good. You know, number one is, if I remember right from this article in the Gazette, that someone pointed out in the chat that it originated with, I guess, this Cami Koons or something, with the Capital Dispatch.

393

01:08:41.890 --> 01:08:47.809

Steven Spangler: But the Gazette published it, and that's where I saw it. You came from Texas originally, right?

394

01:08:47.819 --> 01:08:48.809

James Bruton: I did, yes.

395

01:08:48.810 --> 01:09:04.289

Steven Spangler: I was very impressed, like, how aware of that they are in the, the Texas state park system. You know, these things of these stickers, I haven't seen that on any other, in any other state.

396

01:09:04.330 --> 01:09:11.089

Steven Spangler: And they have this park... did you ever go to Brazos Bend State Park, south of Houston?

397

# Dark Sky Sites in Iowa

01:09:11.090 --> 01:09:15.020

James Bruton: I, I never did. I, I was, no, I, I, I, I was, it was...

398

01:09:15.029 --> 01:09:26.649

Steven Spangler: have this George Observatory there that is actually a pretty... has, like, a 30-inch telescope and so on, and so, yeah, I was impressed with how much they had,

399

01:09:26.839 --> 01:09:46.769

Steven Spangler: you know, astronomy events featured in the whole state park system. So, I mean, they're very progressive about that. The other, you know, the reaction I have in listening to your comments here about the economic development is if you go back to this map I showed of the light pollution in Iowa.

400

01:09:46.959 --> 01:10:03.179

Steven Spangler: The places where you'd really say, these are the place... these are the best places you want to go, are also the places that have really lost population, and I think that this, Nine Eagles State Park is in what's called Decatur County.

401

01:10:03.179 --> 01:10:10.479

Steven Spangler: Which is... has, like, a population of... I think it was 6,000 people, or something like that. I don't remember, but it's pretty small.

402

01:10:10.799 --> 01:10:30.649

Steven Spangler: And, I think it's one of, you know, these counties could really use, some, some economic development. And if, you know, you start saying, if you really want to see dark skies, that's the place you go, and these people will go and spend money and, and so on. But then.

403

01:10:30.649 --> 01:10:38.349

Steven Spangler: you gotta put the initiative, which I think in a case like that, wouldn't be that much, of trying to control the light pollution in that state park.

404

01:10:38.359 --> 01:10:44.409

Steven Spangler: And then in a couple of these towns, like Davis City and Leon, that are around there.

405

01:10:44.449 --> 01:10:49.379

Steven Spangler: But it's kind of the places that would be the, the,

406

01:10:49.709 --> 01:11:01.519

# Dark Sky Sites in Iowa

Steven Spangler: the best options for focusing your efforts are also the ones that I think you can make the, the economic development. Like, for instance, there's

407

01:11:01.629 --> 01:11:14.979

Steven Spangler: There is these... and the Gazette has had a number of articles about this Honey Creek, resort that the state set up in Appanoose County, which is another one of the counties on the, the, the, the lower levels.

408

01:11:15.349 --> 01:11:19.669

Steven Spangler: And they did that, decided, let's have this resort out here.

409

01:11:19.979 --> 01:11:38.249

Steven Spangler: And it's on a Lake Rathbun to try and do economic development. They've had all kinds of problems with it, but, you know, so these counties have a natural advantage in a dark sky, and if you try and preserve that and market it, then you might get some good effects as a result.

410

01:11:38.670 --> 01:11:56.199

James Bruton: I appreciate you saying that, you know, Steven, and that's certainly the case. You know, I had a conversation with someone, you know, Iowa has the Council of Governments, and I don't know, you know, exactly how much power they really have, you know, over being able to, you know, for policy, but, you know, Adair County.

411

01:11:56.200 --> 01:12:01.580

James Bruton: Which is just southwest of, of, of Iowa. I'm sorry, of, of, of Des Moines.

412

01:12:01.580 --> 01:12:02.010

Steven Spangler: You know, who's.

413

01:12:02.010 --> 01:12:11.940

James Bruton: going through a new strategic planning, process right now through the Council of Governments, and I forget exactly which of the Council of Governments, is, you know, is in charge of that area.

414

01:12:11.940 --> 01:12:25.030

James Bruton: And, you know, I reached out to the person that was in charge of that and sent him a lot of information about it, hoping that, you know, taking into consideration, you know, dark skies might be part of their strategic plan as they think about the economic development.

# Dark Sky Sites in Iowa

415

01:12:25.030 --> 01:12:44.900

James Bruton: aspect of it. And as you think about Texas, right, I mean, there's a whole song about it, you know, stars at night are big and bright, deep in the heart of Texas, so I'm not entirely surprised, you know, that, you know, they're trying to hold onto that. But it's, you know, at the same time, you're also, you know, right in that there's a lot of personal freedoms, you know, that they want to hold onto as well.

416

01:12:45.010 --> 01:13:03.730

James Bruton: But, you know, if you go to DarkSkyIowa.org, right now it just, redirects you to a Facebook page. My hope is to be able to put an actual web page together, you know, at some point, but I put together a graphic there, using the same, website that you were showing earlier, showing the Bortle scales.

417

01:13:03.730 --> 01:13:12.079

James Bruton: And, because part of the conversation that I had with this gentleman from Adair County was that he didn't feel that, you know, the...

418

01:13:12.080 --> 01:13:21.720

James Bruton: light pollution was coming from the rural communities, that it was, you know, just coming from the metropolitan areas. But if you take a look at the difference between 2006 and 2022.

419

01:13:21.720 --> 01:13:29.039

Steven Spangler: you know, you see that there is a difference even within the rural communities. I believe that, you know, by and large, as you said earlier during your comments, it's...

420

01:13:29.040 --> 01:13:38.180

James Bruton: you know, due to the, you know, the LED lights that are being put in place, and just the extreme whiteness of them. You know, not necessarily because of population increase.

421

01:13:39.350 --> 01:14:02.269

James Bruton: But I appreciate your comments and certainly want to be able to focus on those areas, you know, and that's really why that article out of the Kiowa Capital Dispatch that you read in the Gazette is why I was focusing on rural areas. We know the metropolitan areas, you know, can benefit from this as well, but it's a lot easier for these rural areas to be able to preserve their night skies and improve upon it.

422

01:14:02.270 --> 01:14:06.700

James Bruton: than it is to try to change, you know, a metropolitan area, you know, like the Des Moines Metro.

# Dark Sky Sites in Iowa

423

01:14:07.460 --> 01:14:08.110

Steven Spangler: Yep.

424

01:14:08.830 --> 01:14:21.959

Steven Spangler: No, all that sounds fantastic. Someone put up a message in the chat, here just a second ago about the... that they had actually gone to this Honey Creek Resort

425

01:14:21.960 --> 01:14:32.969

Steven Spangler: And thought it was pretty good. I've never been there, so I'll concede to their, there's actually a state park, there's a Honey Creek State Park, and there's a Honey Creek Resort.

426

01:14:33.070 --> 01:14:38.900

Steven Spangler: And I thought the resort would... resorts like to have lots of lights and so on. There's.

427

01:14:39.420 --> 01:14:41.799

iPad: the, so...

428

01:14:41.800 --> 01:14:44.549

Steven Spangler: Whoever did that, it's iPad, yeah, iPad...

429

01:14:44.550 --> 01:14:46.440

iPad: Yes, Steve, that's me.

430

01:14:46.440 --> 01:14:48.370

Steven Spangler: Oh, is that you? Okay.

431

01:14:48.370 --> 01:14:58.270

iPad: Yeah, the resort itself, lots of light pollution, but the area around it, very dark, really primed for this kind of thing.

432

01:14:58.270 --> 01:14:59.000

Steven Spangler: I'll bet.

433

01:14:59.000 --> 01:15:12.020

iPad: And, you know, if good management would come to Honey Creek and... and did some mitigation, you could, you know, it could be better.

434

01:15:13.780 --> 01:15:25.220

# Dark Sky Sites in Iowa

Steven Spangler: I might say that everyone should get a sort of a copy of the Gazette and read the interview with James. And like I say, I meant to do that, but just forgot, so I'm grateful to Michael for pointing that out.

435

01:15:25.430 --> 01:15:27.270

Steven Spangler: Because that's a,

436

01:15:27.490 --> 01:15:33.959

Steven Spangler: That's a, a big step forward, and we should really use that as a, as kind of a,

437

01:15:34.820 --> 01:15:38.259

Steven Spangler: A, beginning to maybe doing something.

438

01:15:41.300 --> 01:15:44.800

James Bruton: Michael put a link to it in the comments. Okay.

439

01:15:44.800 --> 01:15:49.039

Chris Kardos: So everyone should be able to access it there. That's on the Capital Dispatch?

440

01:15:49.040 --> 01:15:50.190

James Bruton: That is correct, yes.

441

01:15:50.190 --> 01:15:52.450

Chris Kardos: And do you remember what day it was in the Gazette?

442

01:15:52.450 --> 01:16:01.210

Steven Spangler: I think it was a week ago today. I'm not sure, but I think it was a week ago today. I don't know, somebody else...

443

01:16:01.210 --> 01:16:02.790

James Bruton: I feel like it was a second.

444

01:16:02.790 --> 01:16:04.510

Michael Schmidt: It was Pablo, based on...

445

01:16:04.510 --> 01:16:05.789

AlanE: Saturday the 3rd.

446

01:16:06.450 --> 01:16:09.960

# Dark Sky Sites in Iowa

Michael Schmidt: I have on here, the article was December 31st.

447

01:16:10.410 --> 01:16:11.049

Michael Schmidt: Oh, wow.

448

01:16:11.050 --> 01:16:22.950

James Bruton: The original article came out in Capital Dispatch, I believe. There was a dozen or more, probably 20 different, which is fantastic, different, news outlets within the state and even in Minnesota, that.

449

01:16:22.950 --> 01:16:24.779

Steven Spangler: Oh, fantastic, yeah.

450

01:16:24.780 --> 01:16:29.979

AlanE: Cedar Rapids Gazette published it on Saturday, December 3rd, or January 3rd of this year.

451

01:16:30.590 --> 01:16:33.879

Steven Spangler: Okay, thank... that's what I thought, yeah, thank you, Alan.

452

01:16:34.830 --> 01:16:44.269

Steven Spangler: So, James, are you associated with either the Ames Area Amateur Astronomers or the Des Moines Astronomical Society?

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01:16:44.270 --> 01:16:49.999

James Bruton: I am not, Steven. I'd love to get in contact with them and be able to speak to the people there.

454

01:16:50.000 --> 01:16:51.560

Steven Spangler: Yeah, I mean, there is a...

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01:16:51.560 --> 01:16:54.380

James Bruton: That's a pretty easy, easy audience to speak to.

456

01:16:54.380 --> 01:17:04.790

Steven Spangler: Yeah, I mean, the reason is, I mean, we'd love to have you come over to Cedar Rapids, but, you know, it's a little bit, I don't know, I'll defer to Chris, our president and so on, but the,

457

01:17:04.890 --> 01:17:06.170

Steven Spangler: But,

# Dark Sky Sites in Iowa

458

01:17:06.380 --> 01:17:15.150

Steven Spangler: It's... there is a big, astronomy club in Cedar Rapids that's called the Des Moines... or in Des Moines, called the Des Moines Astronomical Society.

459

01:17:15.150 --> 01:17:26.750

Steven Spangler: And I only know 3 people there, and I know their first names and not their last names. And then there's the Ames Area Amateur Astronomers, and, like, there's this Mackenzie Uhlinhoff.

460

01:17:26.920 --> 01:17:33.280

Steven Spangler: And, so, you know, it's the kind of thing where Ames isn't far from Des Moines.

461

01:17:33.310 --> 01:17:57.170

Steven Spangler: And I think they'd probably love to have you come up, you know, come up there and talk to them about this issue. What you might do is, if you can get on the University of Iowa website with Physics and astronomy, I have a, I have an email there, or it's just steven with a V, hyphen, not underscore, spangler at uiowa.edu. Send me an email, and then we can, we can establish a,

462

01:17:57.170 --> 01:17:59.830

Steven Spangler: a communication, and I'll send you

463

01:17:59.920 --> 01:18:08.089

Steven Spangler: the link to this Ames Club. But, I mean, you should definitely talk to them, because this Mackenzie is a real, mover and shaker.

464

01:18:08.290 --> 01:18:16.739

James Bruton: Great. And I'm gonna put, and I'm just james at darkskyiowa.org, I'm gonna put that here in the comments as well. Okay, very good.

465

01:18:18.650 --> 01:18:19.550

Chris Kardos: No, thank you.

466

01:18:19.550 --> 01:18:20.300

Steven Spangler: to do it.

467

01:18:20.600 --> 01:18:36.279

## Dark Sky Sites in Iowa

Chris Kardos: Let me just mention that, you know, some of our viewers tonight are probably not watching the chat, but you have the ability to open that up and see these messages and links and that sort of thing, and there are some good comments in there as well, so...

468

01:18:36.480 --> 01:18:37.990

Chris Kardos: Take advantage of that.

469

01:18:39.370 --> 01:18:48.560

James Bruton: And I appreciate just being here, appreciate, you know, having this conversation here, appreciate listening to you. I didn't really, you know, anticipate making any comments today.

470

01:18:48.560 --> 01:19:03.379

James Bruton: You know, but, you know, what's interesting is that, you know, it's... I know that this community is obviously very, you know, in tune to dark skies. But, you know, when I'm having conversations with rural communities and, and quite frankly and beyond, they've just never even heard of it.

471

01:19:03.380 --> 01:19:14.940

James Bruton: You know, it reminds me of, you know, plastics in the 80s, when we didn't even really think about it, we weren't thinking about recycling, we weren't even really thinking about whether or not we were throwing something out of our car window.

472

01:19:14.940 --> 01:19:28.840

James Bruton: You know, it really took a pretty big movement, you know, of education, you know, around, around the need to recycle, reduce, you know, reuse, things of that nature.

473

01:19:28.840 --> 01:19:39.559

James Bruton: And, you know, when, you know, there were some educators at this nature summit, you know, here in Iowa in November. And, you know, it's just, you know, light pollution just isn't something that's being talked about in schools.

474

01:19:39.560 --> 01:19:53.179

James Bruton: in the way that lots of other types of pollution is. So it, it really, it's going to require some time, as all things do, but right now, it's, you know, it's really an education, component of this.

475

01:19:53.240 --> 01:20:13.440

James Bruton: And, you know, hopefully we're able to get there. There's a lot of people that are talking about it, but it's very industry-focused. There's a lot of people in the lighting industry that are talking about

# Dark Sky Sites in Iowa

it, but it just hasn't... it hasn't made its way into just the, you know, our community's vernacular and kind of the effects that it has.

476

01:20:15.210 --> 01:20:31.920

Steven Spangler: Well, there was an article in Atlantic Magazine, I think this is, like, 3 years ago, on, the effect of this on wildlife, which is horrendous. I mean, in that, in fact, this guy, Bruce Blair, who's the chief ranger at, at,

477

01:20:32.180 --> 01:20:41.400

Steven Spangler: Yellow River said that was his principal interest, is that it's incredibly disruptive to migration patterns and all of that.

478

01:20:41.400 --> 01:20:41.830

James Bruton: Nocturnal.

479

01:20:41.830 --> 01:20:42.210

Steven Spangler: Yeah.

480

01:20:42.810 --> 01:20:43.510

Steven Spangler: Yeah, I mean, it's...

481

01:20:43.720 --> 01:21:00.929

James Bruton: extremely disruptive to wildlife. It's extremely disruptive to our circadian rhythms. It's been linked to heart disease, it's been linked to cancer in some studies, you know, urban night skies. I mean, truly, the effect is extremely broad, you know, far beyond just being able to.

482

01:21:00.930 --> 01:21:05.030

James Bruton: You know, you know, see the night sky, just the overall effect of.

483

01:21:05.030 --> 01:21:19.380

James Bruton: artificial light at night, that, that it, that it has, you know, across the board is massive, and... which is why I haven't really thought about, you know, starting another nonprofit here in Iowa. I feel like we have enough nonprofits in Iowa.

484

01:21:19.380 --> 01:21:34.189

James Bruton: And this affects so many different nonprofits that are out there, nature and beyond, that really I'm hoping to work through some other nonprofit organizations here in Iowa to help get the word out. And I've had some success there, and, you know, hope to have more, obviously.

# Dark Sky Sites in Iowa

485

01:21:35.670 --> 01:21:43.780

John Leeson: I did... I had, a comment here, there is some interest in the political.

486

01:21:44.190 --> 01:21:48.230

John Leeson: realm. A few years ago, the city of Hyalasa.

487

01:21:48.430 --> 01:21:52.629

John Leeson: got an award from International Dark Sky Association.

488

01:21:53.540 --> 01:22:00.419

John Leeson: for their... Lighting ordinance, and for their street lighting. If you

489

01:22:00.760 --> 01:22:05.939

John Leeson: are from the Cedar Rapids area, drive out north Centerpoint Road through

490

01:22:06.100 --> 01:22:10.419

John Leeson: downtown Hiawatha, and have a look at their streetlights.

491

01:22:10.540 --> 01:22:13.079

John Leeson: How drastically different it is.

492

01:22:13.300 --> 01:22:27.110

John Leeson: You could drive through... you could drive out North Center Point Road through Hiawatha, when it's dark out, and forget to turn your headlights on. You wouldn't even notice it until you drove out of town.

493

01:22:27.460 --> 01:22:33.459

John Leeson: But yet, there's virtually no light that goes anywhere except on the ground.

494

01:22:33.460 --> 01:22:33.900

Steven Spangler: Great.

495

01:22:33.900 --> 01:22:35.249

John Leeson: All those street lights.

496

01:22:37.490 --> 01:22:38.269

Steven Spangler: Well, thank you, Joe.

# Dark Sky Sites in Iowa

497

01:22:38.270 --> 01:22:38.970

John Leeson: sword.

498

01:22:40.420 --> 01:22:49.290

Steven Spangler: Well, you know, so I think along those lines, that's a nice contribution, John, because I think that, you know, getting back to the observatory.

499

01:22:49.530 --> 01:22:50.650

Steven Spangler: there's...

500

01:22:51.040 --> 01:22:59.729

Steven Spangler: You know, I think the things we have to worry about are Solon and North Liberty, and you would tend to think they might be receptive

501

01:22:59.840 --> 01:23:10.809

Steven Spangler: argument. They probably haven't thought about it. I mean, I think this is like the campground at Nine Eagles. It's probably the ranger there just hasn't thought about it, and if they would.

502

01:23:11.070 --> 01:23:14.279

Steven Spangler: They'd change it. It wouldn't take that much, but...

503

01:23:23.810 --> 01:23:37.170

James Bruton: Well, if anyone has any questions or anything that, you know, they feel I should be doing more of, you know, I'll do everything that I can. I appreciate the time being able to chat with you all today. Really, more than anything, I appreciate, Steven, your comments, and...

504

01:23:37.170 --> 01:23:46.500

James Bruton: you know, I hope to get out a little bit more and experience these dark skies, and hopefully with the work of all of us, we can expand that across Iowa and beyond, even.

505

01:23:46.780 --> 01:24:06.360

Steven Spangler: Well, James, thank you so much for showing up, and Michael, thank you for bringing... reminding me of this, and making the connection, and I think this was very worthwhile. So, if anybody that hasn't read the Gazette article, or the, or the one in the Capitol Dispatch should, because it's quite relevant.

506

01:24:12.250 --> 01:24:18.710

# Dark Sky Sites in Iowa

Chris Kardos: Okay, well, anybody else care to chime in on anything? If not, we can wrap this up.

507

01:24:19.500 --> 01:24:24.890

AlanE: Well, I should... I should mention that Steve pointed out that link at the beginning, which had the Bortle scale.

508

01:24:25.080 --> 01:24:25.470

Steven Spangler: Yeah.

509

01:24:25.470 --> 01:24:30.869

AlanE: I picked up my phone, went to the App Store, and sure enough, there's an app out there that you can just download it to your phone.

510

01:24:31.440 --> 01:24:35.509

Steven Spangler: There you go, Alan, there you're always on top of things like that. Thanks, that's...

511

01:24:35.510 --> 01:24:37.939

Chris Kardos: And what's... what's the name of the app, Alan?

512

01:24:37.940 --> 01:24:44.830

AlanE: Well, it's already downloaded here. It's, it's whatever Steve had.

513

01:24:45.350 --> 01:24:48.500

Steven Spangler: DarkSky.app, isn't it? Let's see what it is.

514

01:24:48.500 --> 01:24:51.699

AlanE: It's LPM, light pollution something or other.

515

01:24:52.010 --> 01:24:56.790

Steven Spangler: Here it is, light... it's... it's the HTTPS, etc.

516

01:24:57.110 --> 01:25:02.320

Steven Spangler: Literally, light pollution map, all spelled together, dot app.

517

01:25:12.370 --> 01:25:14.940

Chris Kardos: That was lightpollutionmap.app.

518

01:25:15.130 --> 01:25:15.710

Steven Spangler: Yep.

# Dark Sky Sites in Iowa

519

01:25:15.920 --> 01:25:18.369

Steven Spangler: That's what I have on the link there.

520

01:25:23.180 --> 01:25:23.760

Chris Kardos: Thank you.

521

01:25:23.760 --> 01:25:35.400

Steven Spangler: There have been some articles in Sky and Telescope about these offsets I kind of referred to. So, I mean, if you're a regular reader of Sky and Telescope, you can be on top of that. Otherwise, like I say.

522

01:25:35.550 --> 01:25:40.759

Steven Spangler: If you aren't a member of the Cedar Astronomers, join, and you can use our library.

523

01:25:43.380 --> 01:25:46.160

Steven Spangler: How do you like that, Chris? You know, beefing up, trying to beef.

524

01:25:46.160 --> 01:25:46.680

Chris Kardos: Yeah.

525

01:25:46.680 --> 01:25:47.490

Steven Spangler: Membership, right?

526

01:25:47.490 --> 01:25:49.190

Chris Kardos: Absolutely, yes.

527

01:25:49.320 --> 01:25:56.120

Chris Kardos: And... and while you're at it, I'll plug the fact that, I don't... I don't think Al is on anymore, but Al...

528

01:25:56.310 --> 01:26:04.109

Chris Kardos: Scheidler is the, president of the North Central Region of the Astronomical League. He was on the call earlier, and... Oh, good.

529

01:26:04.930 --> 01:26:11.629

Chris Kardos: just point out that, the Cedar Amateur Astronomers are hosting the,

530

# Dark Sky Sites in Iowa

01:26:11.910 --> 01:26:19.290

Chris Kardos: regional convention, here in 2026 in May. It'll be from May 15th through 17th.

531

01:26:19.620 --> 01:26:26.470

Chris Kardos: And, anybody that's interested in attending, we don't quite have our website for that up yet.

532

01:26:26.610 --> 01:26:33.249

Chris Kardos: But, you know, keep the dates in mind, and you'll be hearing more about that in the short and near future.

533

01:26:44.320 --> 01:26:54.309

Chris Kardos: Okay, well, it's gotten pretty quiet, so I think maybe it's time to wrap things up. Let me, thank all of those... all of you who joined us, and

534

01:26:54.430 --> 01:26:59.830

Chris Kardos: Hope you enjoyed the evening, I certainly did. And,

535

01:27:00.560 --> 01:27:09.099

Chris Kardos: We'll look forward to seeing you, next week, or next month, for our, last virtual public meeting, and then we'll go...

536

01:27:09.220 --> 01:27:24.269

Chris Kardos: in person again. Now, for those of you who are not aware, even when we have them in person at our observatory, we also carry them on Zoom, so if you can't make it out physically on that night, you can join us by Zoom.

537

01:27:24.500 --> 01:27:26.779

Chris Kardos: For any of the meetings throughout the year.

538

01:27:27.970 --> 01:27:32.979

Steven Spangler: Thanks to Michael and James for showing up. That really made the whole... the whole thing.

539

01:27:33.210 --> 01:27:36.089

Chris Kardos: Yes, thanks to both of you as well.

540

01:27:36.950 --> 01:27:37.940

Chris Kardos: All right.

541

# Dark Sky Sites in Iowa

01:27:38.150 --> 01:27:45.050

Steven Spangler: All right. Good rest of your evening, everybody. We didn't miss much in the way of viewing tonight. It's pretty cloudy out there.

542

01:27:45.080 --> 01:27:49.370

Chris Kardos: So, wouldn't have helped to be at the observatory anyway, so...

543

01:27:50.140 --> 01:27:54.789

Steven Spangler: Have a good night, have a good weekend, and see you all soon. Thank you.

544

01:27:55.090 --> 01:27:55.459

James Bruton: Appreciate it.

545

01:27:55.460 --> 01:27:56.240

Steven Spangler: Bye-bye.

## Meeting Chat:

00:29:12 Bart: Here is the article: <https://skyandtelescope.org/wp-content/uploads/BortleDarkSkyScale.pdf>

01:00:02 candace: The Cerulean Warbler at Yellow River SP is a big deal...that area has actually been designated as a Global Important Bird Area.

01:13:17 Jim Taylor: Dark skies after Northridge, CA earthquake, lights were out for several nights in the 90â€™s - folks in SoCal were baffled by what they saw in the skyâ€!

01:15:14 Michael Schmidt: My family camped in Cantril, IA last summer and mentioned how clear the stars were if you are interested in a suggestion.

01:23:18 Michael Schmidt:

Article<https://iowacapitaldispatch.com/2025/12/31/one-iowans-quest-for-darker-skies-might-benefit-rural-iowa/>

01:30:54 candace: Replying to "My family camped in ..." Yes, the Cantril area and even Lacey Keosauqua State Park in Van Buren County may be good options. I do a frog & toad survey for the IA DNR in Van Buren County and the night skies (and fireflies) are gorgeous!

01:32:50 iPad: Honey Creek area great; observed from a friendâ€™s yard there several years ago. Prime for astrotourism!

01:33:53 Jim Taylor: In Texas, spent several nights at Three Rivers Astronomy site - very dark and well equipped. Astronomy Campus at 3 Rivers Ranch

01:34:21 Jim Taylor: Equipment at the Astronomy Campus: Ash Dome: This observatory is the campus's main feature observatory. It was constructed exceptionally well and the concrete post on which the pier sits is separated from the observatory floor to mediate vibrations from foot traffic. The large pier post sits deep into the ground, much deeper than the main floor around it. The telescope is a 15â€ f12 D&G refractor

# Dark Sky Sites in Iowa

manufactured in the late 70s with an eyepiece carousel. The telescope magnification can be changed immediately between 3 different eyepieces. A 21mm Ethos, 30mm Nagler, and a 44mm wide angle. The polar alignment and star tracking are perfect and targets never drift from view. It also has a near-perfect balance. The mount is an Astro-Physics 3600 GTO with the latest CP4 controller and updated hand controller.

The primary use of this scope is for viewing during star parties or events and not outfitted with any imaging or projection equipment.

01:36:01 Mike Miller and Laura Runkle: The Star Hill Inn in Las Vegas, NM, was a locus of astrotourism in the 1990s. The original owners retired; it was a far destination for almost everyone who visited (my younger brother and father), and advertised in Sky and Telescope at that time.

01:38:32 James Bruton: james@darkskyiowa.org

01:41:49 candace: This looks to be the Atlantic article:  
<https://www.theatlantic.com/press-releases/archive/2022/06/july-august-cover-story-our-blinding-blaring-world/661258/>

01:42:55 iPad: Many club members have advocated for dark skies with minimal success. I think the key may very well be tied to economics of communities. I hope this is the missing piece of the advocacy puzzle that will turn things around!

01:44:48 candace: Thank you all for your time and the information. This has been very informative.