Jim Zuckerman's

PHOTO INSIGHTS

March 2024

How to photograph a total solar eclipse
The new depth of field preview
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On the cover: Blue crested dragon photographed during Jim's semi-annual Frog and Reptile workshop in Kansas City. ***This page:*** A composite of a Venetian costumed model during Jim's Carnival in Venice workshop.

After my photo workshop in Venice last month, my wife and I spent a few days in Copenhagen. We were walking down a very photogenic street when my eyes were diverted to a store front window display selling t-shirts with pithy quotations on them in English. The one that caught my attention was a brilliant insight by Einstein. 'Two things are infinite: the universe and human stupidity; and I'm not sure about the universe."

That cracked me up, and it made me think about some of the idiotic questions and comments I've had over the years regarding my photography. For example, when people see my images they often say, "Your camera takes really good pictures." I always respond by saying, "And I have it on good authority that Shakespeare's pen wrote really good plays."

One of my favorites happened when I was showing a lady some of my wildlife shots from Africa. Shockingly, she asked, "Did you really go there?" I had to hold my tongue from blurting out, "Well, no. I used a 25 million millimeter lens and took the pictures from the top of a tall building to overcome the curvature of the earth."

And then there was the man who showed me a photograph he'd taken of a lone, dead tree in a landscape devoid of anything else except empty grassland and sky. His memorable question was, "What should I have focused on?"

Sometimes you just have to laugh.

Jim Zuckerman
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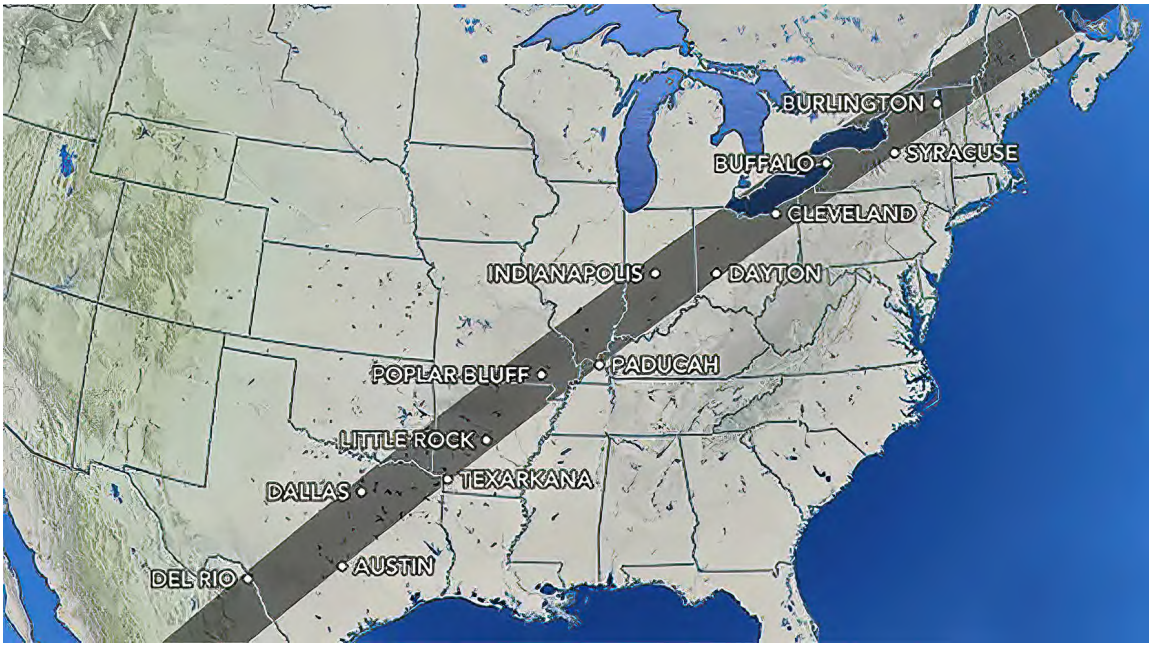
How to Photograph a total solar eclipse

A rare total solar eclipse will be visible from the contiguous United States on April 8, 2024. In Texas, the eclipse begins at 12:06pm, and it reaches totality at 1:27pm. Other locations along the path will experience the eclipse at later times.The path of totality – the track of the moon's shadow across the Earth's surface which is about 50 miles wide – goes from Mexico through Texas to New England. You can see the path in the map at the top of the next page. Positioning yourself in the middle of the path means you will experience darkness for the maximum amount of time which is approximately 4 minutes, almost twice the length of time of the 2017 eclipse. Texas and Oklahoma are the best places for viewing the eclipse only because of the greater likelihood the sky will be clear. But people in the mid-West and New England may get lucky and have a clear view of it, too.

If you really want to see and photograph this celestial event, check the weather in cities all



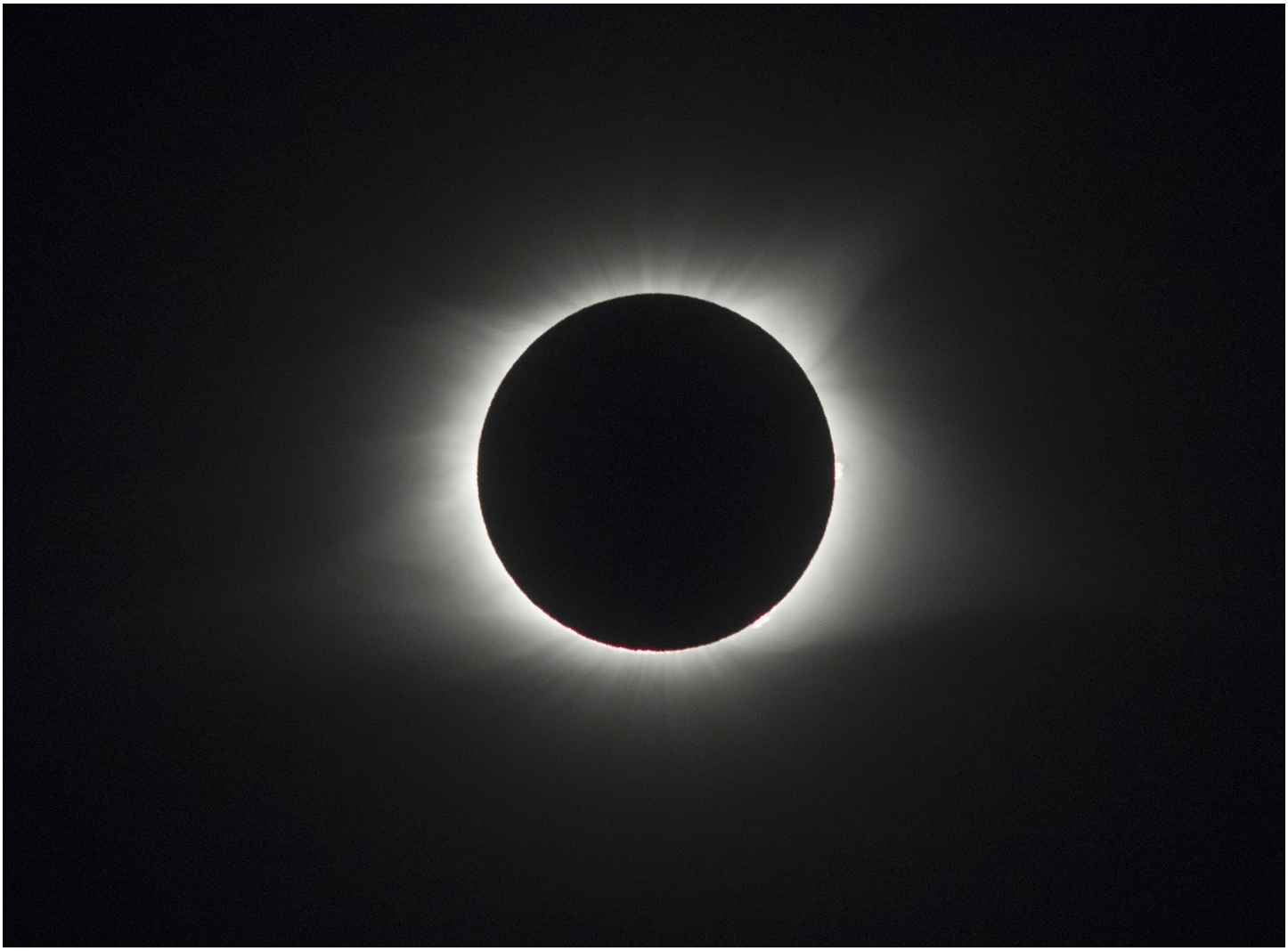
Path of totality of the April 8 total solar eclipse.

along the totality path as we get closer to April 8 to determine where you have the best chance of seeing and experiencing this remarkable occurrence. What you are looking for in a weather report is a clear, cloudless sky.

The next total solar eclipse in America's lower 48 states will be on August 23, 2044.

Personal experience

I witnessed the last total solar eclipse that crossed the United States in 2017, and I can



tell you it is breathtaking. I didn't expect to be so awed by the experience, but I was. Leading up to totality was interesting, but the moment the moon completely obscured the sun, day turned into night in the middle of the afternoon. Stars came out, birds stopped singing, and everyone around me seemed to hold their breath in amazement. It's a photographic challenge, but even if you don't take pictures, the experience of witnessing a celestial event like this at least once in your lifetime shouldn't be missed.

Protecting your eyes

The most important thing to remember when observing and photographing a solar eclipse is to protect your eyes. Looking at the sun for any length of time can cause serious damage to the retina in your eyes and can even cause blindness. You can buy inexpensive 'eclipse glasses' like the ones below I found on Amazon for less than $10, or you can spend more money and indulge in a pair of more fashionable glasses. They both do the same thing -- diminish the sun's light significantly so you can look at it without endangering your vision.

The Birds of Costa Rica

May 13 - 23, 2024

Resplendent queztal

Keel-billed toucan

Alternatively, you could use a neutral density filter of 10 f/stops or more. Close one eye and look at the sun through the other one.

When photographing the 2017 eclipse, I discovered a good way to follow the progress of the moon's movement across the sun: watch the reflection in my car's windshield. I didn't have to use any glasses, and the reduced light allowed me to comfortably watch the celetial event without injury or pain.

If you want to see the eclipse magnified with a telephoto lens and you dont want to be annoyed by cheap eclipse glasses, switch to manual exposure mode (M) and put the shutter speed very fast, such as 1/8000, the lens aperture to f/32, and the ISO to 100. The sun will now be safe to look at directly through the camera because you've significantly underexposed the image.

Once the moon completely covers the sun, you can then look at the eclipse directly and through your camera without danger. As soon as it reappears, precaution must again be taken.

As you can see in the picture below, in 2017 there were times when I had thin clouds to shoot through. That made some of the eclipse images unique. When the main event happened, though, the sky was fortunately clear. Remember even with thin clouds, the sun is too bright to look at directly.

Camera settings

No matter your camera settings, the disc of the sun -- whether seen totally or partially covered

-- is going to be solid white. In other words, it will be blown out with no detail or texture. This means you are really exposing for the sky during the partial eclipse and the sun's corona during the total eclipse.

I took all of the images in this article with a Canon 500mm lens plus a 1.4x teleconverter giving me 700mm of focal length. I wanted the sun to fill a significant part of the frame.

For the image on the previous page, my settings were 1/4000, f/13, and 100 ISO. With this kind of extreme contrast, I determined the settings from studying test exposures on the LCD monitor. The exposure for the image on page 4 was 1/1250, f/9, and 500 ISO. Your conditions may be different than mine, but these numbers will offer you a starting point from which you'll be able to take perfect exposures.

I hand held the camera for these shots not because I wanted to, but because in 2017 the sun's position was almost direct overhead and the ballhead I use on my tripod isn't designed to angle a camera straight up. Even though there was a lot of movement in managing the heavy gear at an upward angle, the fast shutter speed mitigated any possibility of blur.

One more point. The issue of depth of field when it comes to shooting the sun is irrelevant. This assumes you don't include any foreground elements. The only reason you need to use a small lens aperture is simply dealing with the very bright sun and its corona. §

The New
Depth of Field Preview

Back in the day when we all shot film, photography was very different. I bought my first camera, a Canon FT QL, in 1968. The first great innovation just a few years later that created tremendous excitement in the photographic industry was *stopped-down metering.*

This revolutionary invention in the mid-1970s changed everything. Prior to this, when a photographer looked through the viewfinder of a TTL camera, the image appeared bright only when the aperture was wide open. As soon as

SIDE BAR: *TTL, or through-the-lens, means a person looking through the viewfinder is seeing exactly what the lens sees. We take this for granted now, but in the 1960's and before, many cameras such as rangefinders and twin lens reflex medium format cameras didn't offer this. You'd look through a viewfinder while the picture was being taken by a lens which was positioned somewhere else on the camera body. With this system, it was easy to 'cut someone's head off' in framing the shot because, in the viewfinder, the composition looked correct . . . but in actuality it wasn't.*

the aperture ring was manually rotated to select a smaller lens opening (there was no such thing as auto focus at this time), the image in the viewfinder got darker and darker. At f/16 for example, it was hard to compose a picture with confidence because the subject or scene was so dark.

This was a challenge to deal with, but the camera's built-in exposure meter operated on the light it detected entering the camera. A small aperture allows less light into the camera -- i.e. the subject should appear darker -- thus the meter would produce an accurate reading based on this information.

Stopped-down metering

This new feature kept the viewfinder image bright as if the aperture setting was wide open *even though the photographer had selected a small aperture.* No longer did the viewfinder become annoyingly dark when choosing an aperture for increased depth of field. I remember all the national photo magazines publishingt articles applauding this new innovation.

Depth of field preview

The depth of field preview feature was, and is, a way to preview the depth of field you'll have when the picture is taken at a certain lens aperture. Because of stopped-down metering, you are always looking at the subject or scene through a large lens aperture *even though you may have selected a small aperture for increased depth of field.* That's why the viewfinder stays bright, but at the same time, you can't visually assess how much depth of field you will have because the you're viewing the scene through

the largest aperture on the lens.

This is where the DOF preview button comes in. By pushing this button (and pretty much all good cameras have this feature), the camara closes the lens down to your pre-selected lens aperture so you can see the actual DOF. So, because of stopped-down metering, you see a bright scene as if you've chosen, say, f/2.8, even though you wanted more depth of field with an aperture of f/22. The DOF preview button closes the lens down to f/22 so you can preview how much of the scene will be in focus.

However . . . the viewfinder gets very dark at f/22. In other words, using the DOF preview button *overrides the stopped-down metering.* When small apertures like f/16, f/22, and f/32 are selected, the viewfinder gets so dark when using the depth of field preview feature that, to be honest, it's hardly worth the effort. You can barely see the details in the composition.

This is why I never use the depth of field preview feature.

A game changer

When I was writing the article on photographing solar eclipses, I wanted to offer several ways of protecting your eyes from the bright light of the sun. I thought about the depth of field preview button and how it diminishes light when the camera is set to a small lens aperture.

But, to be honest, I had no idea where that feature was in my Canon R5 since I'd never used it. So, I found the button from a YouTube video, but it wasn't working. I called Canon's tech support, and the experienced agent I spoke with didn't know how to set the camera to do what I wanted, either. After waiting 10 minutes on hold, I played around with the camera and then, Eureka!, I found it. When the agent came back on the line, I actually explained it to him.

It turns out that with the advancement of mirrorless cameras, the depth of field preview button has been updated and improved. I don't own a Nikon, Sony, or Olympus camera, but I'm sure it's the same with their mirrorless camera bodies.

When the depth of field preview button is now utilized, you can see how more of the elements in the composition come into focus, BUT . . . *the viewfinder image doesn't get darker!* The DOF preview doesn't override the stopped-down metering feature.

To set up the depth of field preview button in your camera model may take a bit of time researching on YouTube or plowing through the instruction manual, but once it's set up, this is a very useful tool. With every type of photographic situation from landscape photography to fashion shoots, you will be able to see how much will be in focus and what won't be. You can asssess depth of field after you've taken the picture on the LCD screen, of course, but this new approach gives you this information before you snap the shutter. Pictures like the flower field, below, are the perfect situation to use this newly designed preview feature. §

Ethiopia Photo Tour

Jan, 21 - Feb. 3, 2025

a new SHOOTING STYLE

For many years, I only used manual exposure mode for certain types of subjects. For example, when photographing lightning, fireworks, and the Milky Way, you can't use a light meter. That's when I'd use manual mode.

For all the rest of the subjects I photographed, I used aperture priority or shutter priority. Now my entire orientation to shooting has changed. Why? Because technology has changed.

Unlike dSLR's and all cameras before that, mirrorless cameras allow us to see exactly what our pictures are going to look like with respect to exposure. WYSI-WYG: What you see is what you get. If you increase the speed of the shutter, the viewfinder image gets darker because less light is reaching the sensor. If you open the lens aperture from, say, f/11 to f/5.6, the image you see in the viewfinder gets two f/stops brighter. This is revolutionary in photography.

The other change that has impacted how I take pictures has been the improvement of digital technology such that excessive noise is manageable now when using high ISO settings. Noise is less to begin with and with Topaz DeNoise we can mitigate or eliminate outright unwanted noise.

Therefore, I now shoot exclusively in manual mode. This allows me to specifically choose both a shutter speed and a lens aperture. In Av and Tv modes, it's easy to end up with a setting that isn't to your liking. For example, you've chosen f/16 on Av mode for increased depth of field, but because you're shooting in dim light conditions the shutter speed slows down to 1/30. You didn't notice this until it was too late and your images were blurred.

When shooting in M mode, I choose exactly the settings I want. When I turn the ISO dial, the exposure becomes correct because I can see the results in the viewfinder before I take the shot. If I'm shooting in reduced light conditions and the ISO necessarily has to be high to produce a correct exposure, I have the confidence that Topaz DeNoise will effectively deal with that problem.

I haven't used Av or Tv in at least a year, and every photographic situation I've encountered has been effectively exposed by using this method. In addition, when I need a fast speed such as photographing a running mountain lion or needing enough depth of field -- like shooting a stone bridge and tea house in Wales -- I have the confidence that I've chosen the settings correctly and an automatic feature in the camera isn't going to override what I know is necessary to achieve my vision. §

PATAGONIA PHOTO TOUR

October 15 - 26, 2024

Photography Quiz

1. **Which paper size fits exactly the 2 x 3 aspect ratio of our digital images and doesn't require cropping?**
   - **a. 8 x 10**
   - **b. 11 x 14**
   - **c. 5 x 7**
   - **d. 8 x 12**

2. **The complementary color of yellow is:**
   - **a. Blue**
   - **b. Cyan**
   - **c. Green**
   - **4. Yellow**

3. **Focus stacking can be done without a tripod.**
   - **a. True**
   - **b. False**

4. **HDR can be done without a tripod.**
   - **a. True**
   - **b. False**

5. **A neutral density filter adversely affects the color of an image.**
   - **a. True**
   - **b. False**

6. **From f/1.4 to f/22 is how many f/stops?**
   - **b. Eightf/stops**
   - **c. Five f/stops**
   - **d. Six f/stops**

7. **"Negative space" in a photograph means:**
   - **a. A fairly large area with little or no detail**
   - **b. A scratched negative**
   - **c. When the positive and negative tonal values are reversed**
   - **d. A term that only applied to film photography**

8. **The closer a light source gets to a subject, the light becomes:**
   - **a. Warmer**
   - **b. Contrasty**
   - **c. Diffused**
   - **d. Cooler**

9. **What eliminates smog from a cityscape?**
   - **a. A polarizing filter**
   - **b. UV filter**
   - **c. Skylight filter**
   - **d. None of the above**

10. **White balance is the same thing as color temperature.**
    - **a. True**
    - **b. False**

Answers on page 45

UPCOMING PHOTO WORKSHOPS

Snowy Owl Workshop

Close up encounters with these beautiful birds of the North. Capture bird in flight shots in a snowy environment. Jim guides you in camera settings and technique to take the best pictures possible.

January 9 - 13, 2025

Winter Wildlife Workshop

Photograph beautiful North American mammals plus a snow leopard in natural environments. Mountain lions, red foxes, arctic foxes, bobcats, lynx, wolves and more are in their full winter coats. This is a very special workshop.

February 6 - 11, 2025

Carnival in Venice

Photograph amazing costumes in a Medieval environment inside a 16th century palace and in an iconic gondola. The photography as well as the experience is amazing.

February 23 - March 1, 2025

Expand your photographic artistry with

eBooks

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eBooks continued

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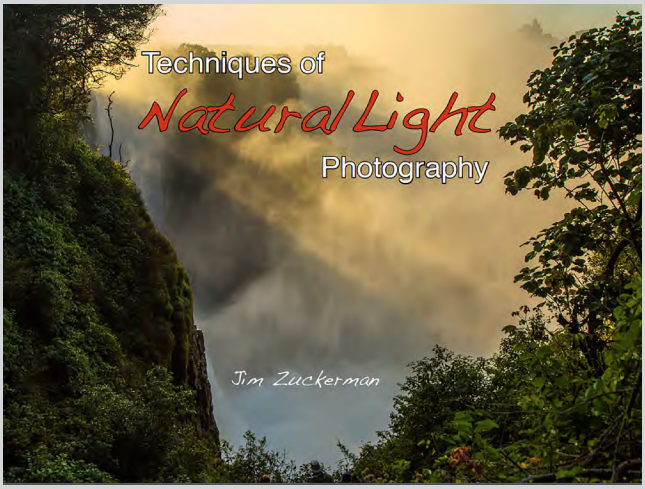
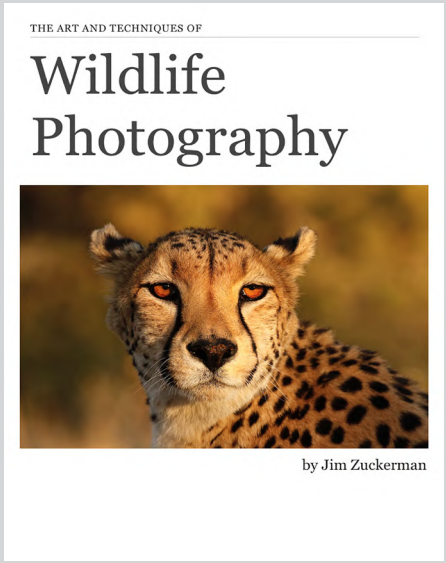
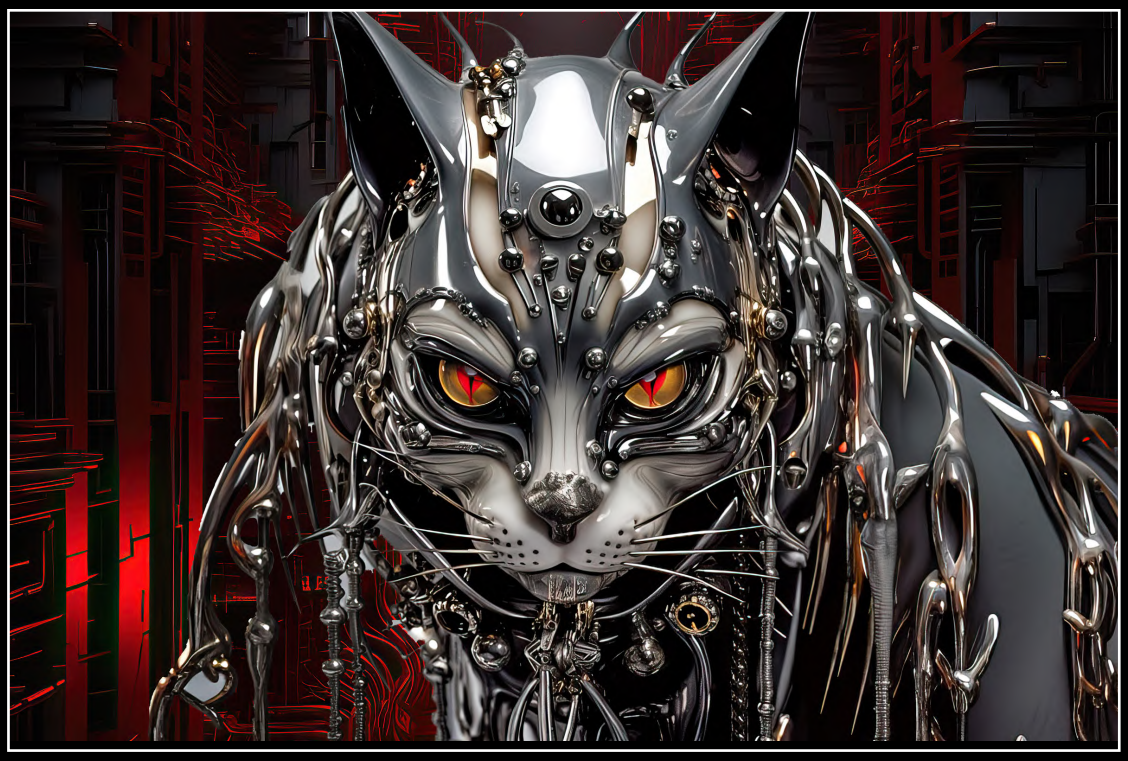




ONLINE AI COURSE

Blow your mind with how creative you can really be!

Starts March 2, 2024



What's wrong with this picture?

White skies are not always bad. Winter landscapes sometimes look great with a white sky. In fact, white on white is one of my favorite color themes in nature.

Usually, though, when you compare a picture with a white sky to one in which the sky has more detail, or perhaps even some drama, it's hard to make the case for the white sky.

I took this picture of a snow leopard during my recent Winter Wildlife Workshop in Montana. There was some subtle detail in the sky, but when I exposed for the cat, the sky went solid white. You can see on the next page what a powerful visual impact storm clouds have on this shot.

In choosing a sky, consider the lighting. The snow leopard was photographed

under a dense overcast, and this produced soft and diffused light. That means the replacement sky had to be one that would create the same type of lighting.

The sky replacement feature in Photoshop (Edit > sky replacement) makes it extremely easy to replace a white sky. If you haven't used it before, I recommend deleting the stock skies Adobe gives you. Those aren't your shots, and everyone has access to them. Once deleted, you can then upload your own skies. I suggest sunrises and sunsets, several storm cloud images, puffy white clouds on a blue sky, rainbows, and even cobalt blue skies typical of dawn and twilight. You'll find they all will come in handy at some point. As you can see with the two versions of the snow leopard, it makes a big difference. §

SHORT AND SWEET

1. All cities, large and small, look their best when photographed at twilight. The colors, the mixture of light and shadow, and the drama of night illumination all go into making great photography. Every time I shoot a city, my favorite images are from twilight. This is Garden by the Bay in Singapore.

2. When it comes to action photography, err on the side of a fast shutter. Even if this pushes the ISO higher than you'd like, if the subject isn't sharp, there's no point. Noise can be eliminated; a blurred animal can't be made sharp. This is a giant river otter in the Pantanal region of Brazil.

3. With so many places all over the world using non-traditional light bulbs, it's hard to know what white balance to use. Relying on auto white balance sometimes works and sometimes doesn't. Experiment when shooting an interior which WB you like. You can always change it in ACR or LR, of course.

4. Making the foreground disproportionately large compared to the background is one of the best ways of shooting landscapes and so many types of subjects and compositions. The formula for a picture like this is placing a wide angle lens close to the foreground and using the smallest aperture for maximum DOF. §

Coast of France and the Loire Valley

April 4 - 13, 2024

ASK JIM

Every month, Jim answers a question from his online students, from people who participate in his tours and workshops, or from subscribers to this magazine. If you have a question you'd like Jim to answer, please drop him a note at photos@jimzuckerman.com.

Q: Jim . . .I have the hardest time capturing birds in flight. It's hard to keep them in the frame, and it seems impossible to get them in focus and sharp. What is your secret?
Fran Johannsen, Lewisburg, Tennessee

A: I've written many articles on this subject. In short, 1) use a fast shutter speed of 1/3200, 2) set up a central cluster of focus points, 3) zoom back so you are not so tight on the birds, 4) if your camera has eye-tracking, use it, and 5) try to anticipate the direction of flight. You will have a lot better chance at getting good pictures when the birds fly left to right or right to left as opposed to flying directly at you. §

Partial List of Photography Tours 2024 - 2025

HOLLAND & BELGIUM
Apr/May 2024

COSTA RICA BIRDS
May 2024

ICELAND DRONE TOUR
Aug/Sept 2024

COLORADO in AUTUMN
Sept/Oct 2024

PATAGONIA
Oct 2024

LOUISIANA SWAMPS
Oct/Nov 2024

AUTUMN in JAPAN
Nov 2024

SNOWY OWLS, CANADA
Jan 2025

WINTER WILDLIFE
Feb 2025

GREAT GRAY OWLS, CANADA
Feb 2025

FAROE ISLANDS
April/May 2025

TEXAS BIRDS
May 2025

For a complete list of all the photo tours/workshops Jim conducts, go to his website: www.jimzuckerman.com.

Great Gray Owls, Canada

Februtary 16 - 21, 2025

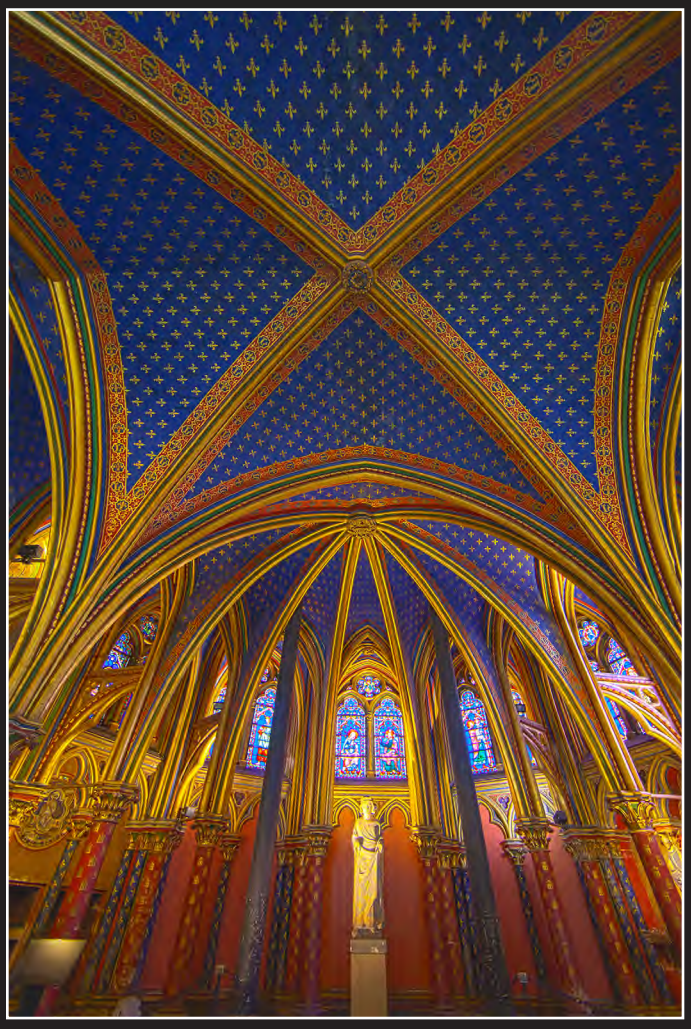
Student Showcase

Each month, Jim features one student who took beautiful and inspiring images on one or more of his photography tours or workshops. It's really fascinating how photographers see and compose such different images even though we may go to the same places. Everyone takes great photographs on Jim's trips.

Sharon Wilson, Costa Mesa, California *White horses of the Camargue, London/Paris photo tour.*

© Sharon Wilson

Student Showcase, continued



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Student Showcase, continued

© Sharon Wilson

Student Showcase, continued

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Autumn in JAPAN

November 20 -29, 2024

HOLLAND & BELGIUM

April 24 to May 2, 2024

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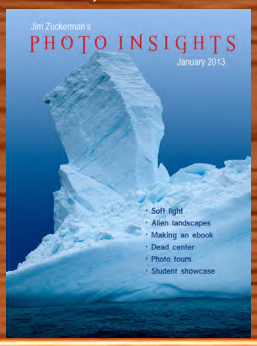
Dec. '12

Jan. '13



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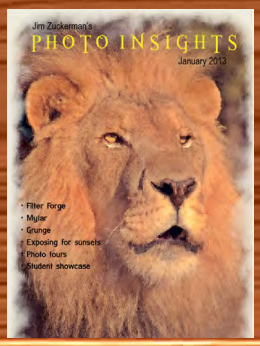

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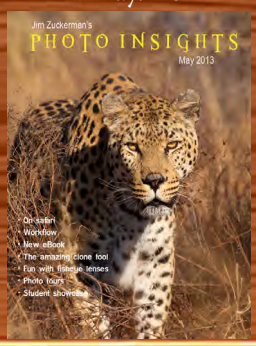
Apr. '13

May. '13



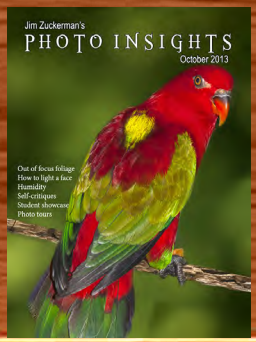
Jun. '13

Jul. 13

Aug. '13

Sept. '13

Oct. '13



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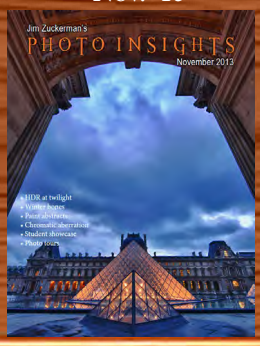

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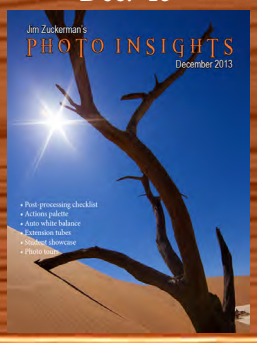

Jan. '14

Feb. '14

Mar. '14

Apr. '14

May '14

Jun.'14

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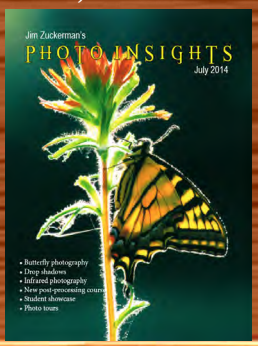

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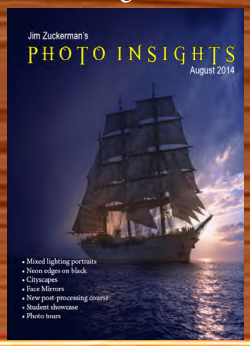

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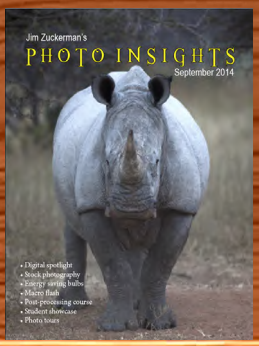

Nov. ‘14

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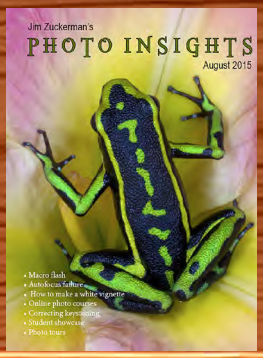

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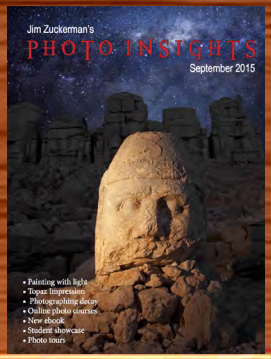

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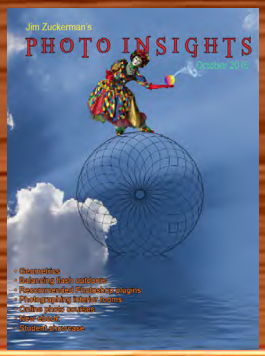

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Apr. ‘16

May ‘16

Jun ‘16

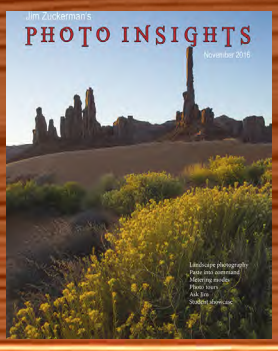
Jul. ‘16

Aug. ‘16

Sept. ‘16

Oct. ‘16

Nov. ‘16



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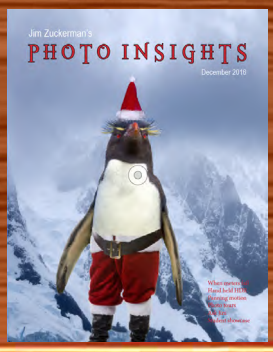


Jan. ‘17

Feb. ‘17

Mar. ‘17

Apr. ‘17

May ‘17

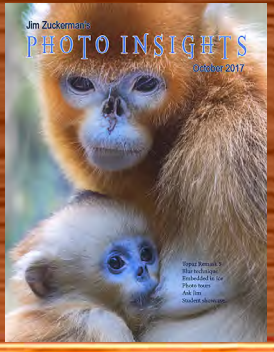
Jun ‘17

Jul. ‘17

Aug. ‘17

Sept. ‘17

Oct. ‘17



Click on the past issues of

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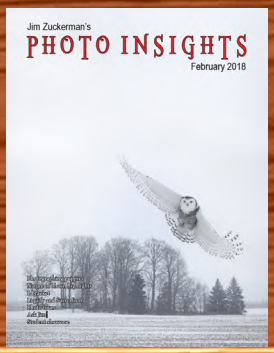
Nov. ‘17

Dec. ‘17

Jan. ‘18

Feb. ‘18



Mar. ‘18

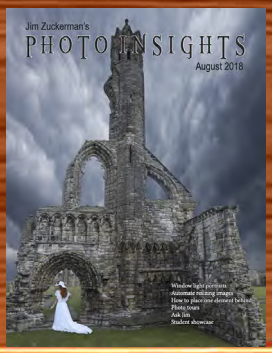
Apr. ‘18

May ‘18

Jun ‘18

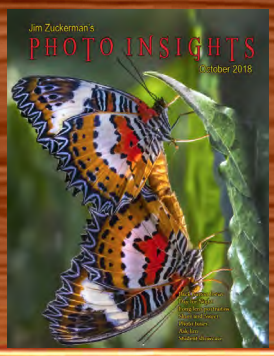
Jul ‘18

Aug ‘18



Sept. ‘18

Oct. ‘18

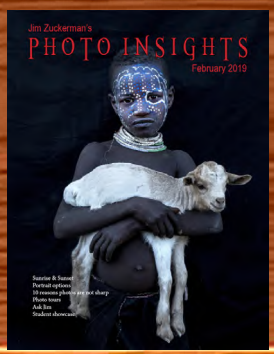


Nov. ‘18

Dec. ‘18

Jan. ‘19

Feb. ‘19



Mar. ‘19

Apr. ‘19

May ‘19

Jun ‘19

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Jul. ‘19

Aug. ‘19

Sept/Oct. ‘19

Nov. ‘19

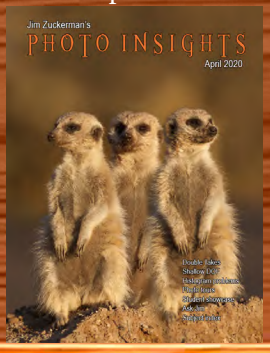
Dec. ‘19

Jan. ‘20

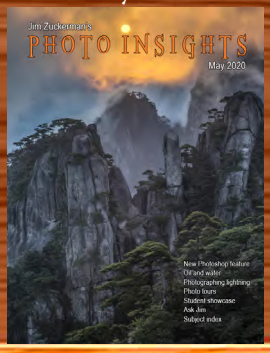
Feb. ‘20

Mar. ‘20

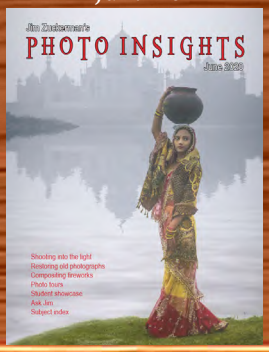
Apr. ‘20



May ‘20



Jun. ‘20

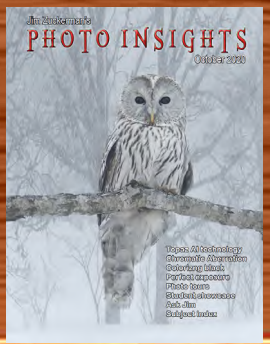


July ‘20

Aug. ‘20

Sept. ‘20

Oct. ‘20



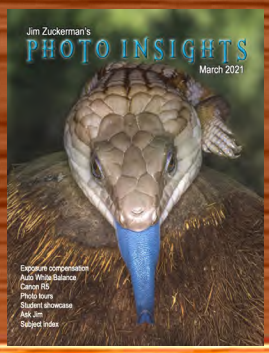
Nov. ‘20

Dec. ‘20

Jan.. ‘21

Feb.. ‘21

Mar.. ‘21



Apr.. ‘21

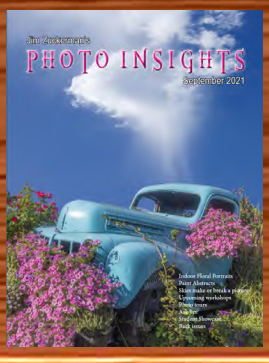
May ‘21

Jun.‘21

Jul.‘21

Aug.‘21

Sept. ‘21



Oct. ‘21

Nov. ‘21

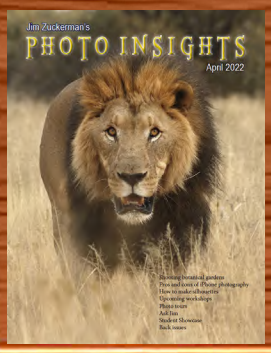
Dec. ‘21

Jan. ‘22

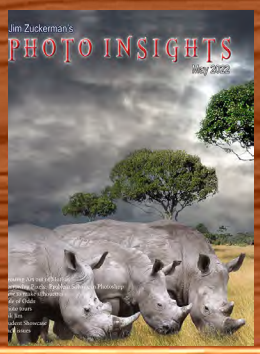
Feb. ‘22

Mar. ‘22

Apr. ‘22



May ‘22



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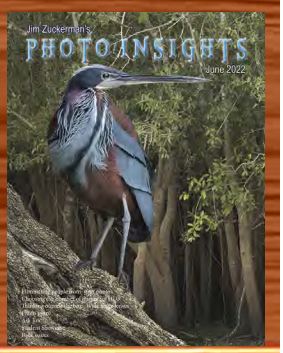
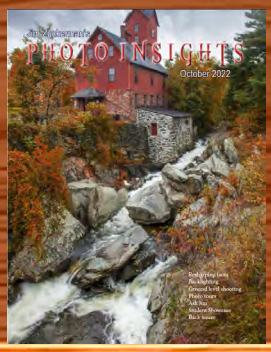


Jul. ‘22

Aug. ‘22

Sept. ‘22

Oct. ‘22



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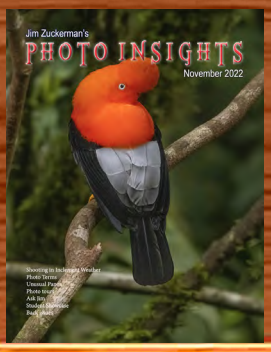

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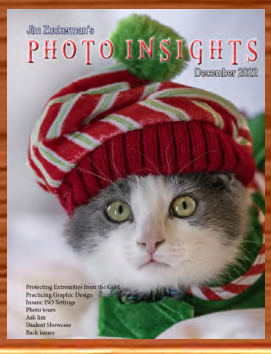
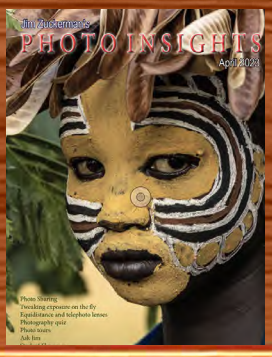


Jan. ‘23

Feb. ‘23

Mar. ‘23

Apr. ‘23



May ‘23

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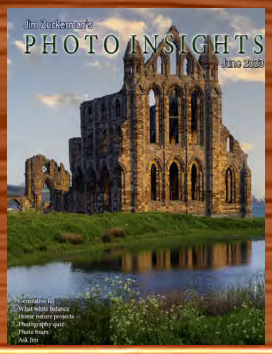


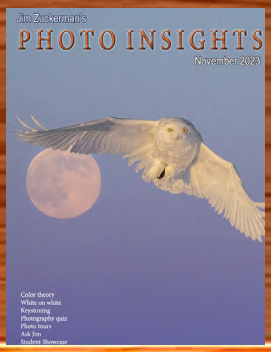
Jul. ‘23

Aug. ‘23

Sept. ‘23

Oct. ‘23

Nov. ‘23



Dec. ‘23

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Mar. ‘24

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Quiz answers

1. d
2. a
3. b
4. b
5. b
6. b
7. a
8. c
9. d
10. a

Your score

90% - 100%: You could have been a pro

80% - 89%: Your glasses probably need a new prescription

70% - 79%: Just don’t quit your day job

< 70%: You should really be using an iPhone

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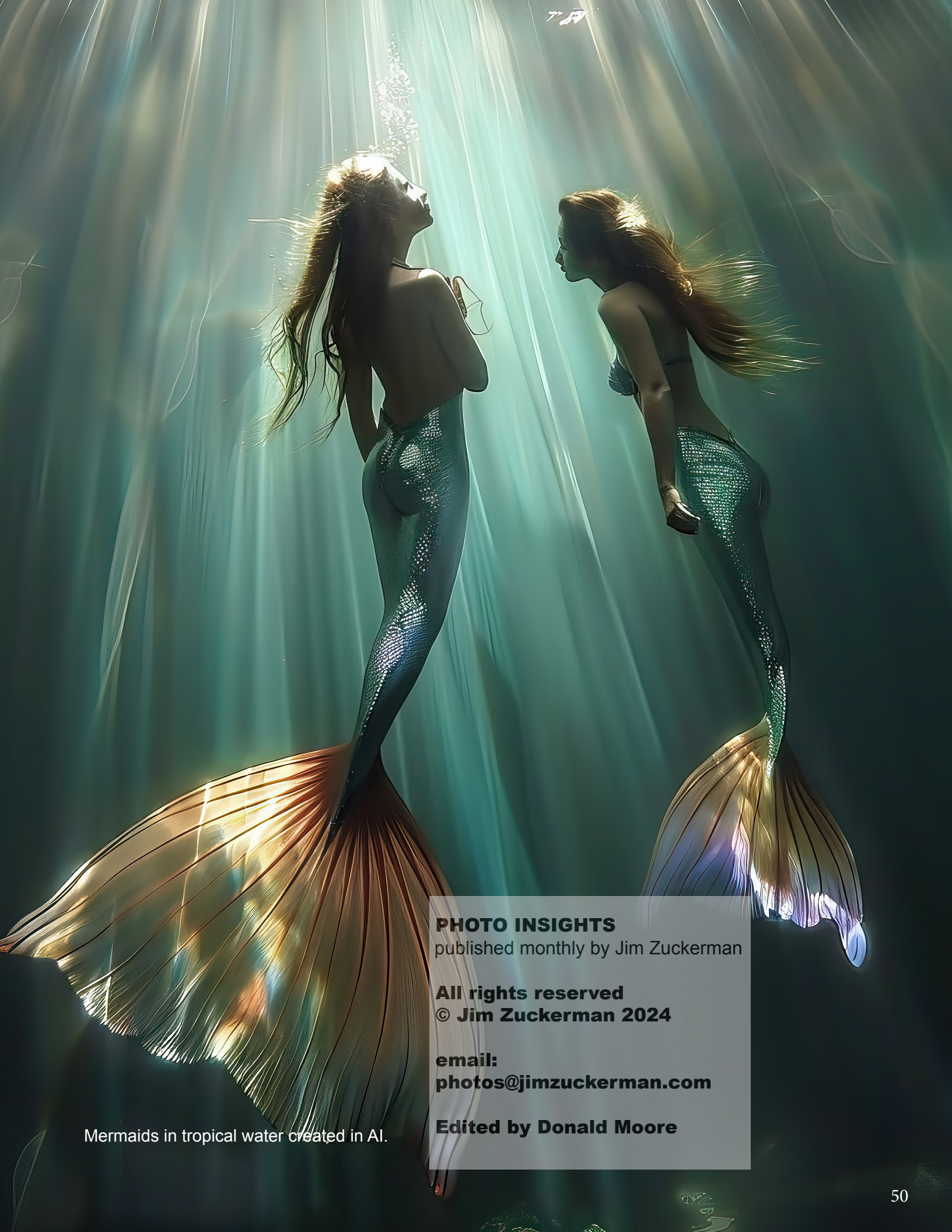

Mermaids in tropical water created in AI.

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Edited by Donald Moore