

# *Camerasderie*

The Newsletter of the NIH Camera Club, Bethesda, MD Vol. 55 (11); November 2018

**Milky Way Over Zion National Park  
By Guillermo Olaizola**



The NIH  
CAMERA  
CLUB

November 2018  
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# 2018 NOVEMBER

SUN	MON	TUE	WED	THU	FRI	SAT
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4	5	6	7	8	9	10
 						
11	12	13	14	15	16	17
		Competition Night				
18	19	20	21	22	23	24
		Travelogue				
25	26	27	28	29	30	

# 2018 DECEMBER

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9	10	11	12	13	14	15
	Save the Date!	Holiday Pot Luck Party	Save the Date!			
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30	31					

# President's Chat

## November 2018

By Linda Eisenstadt



We'll soon have some color around Montgomery County. We've had so much rain this summer and now the chilly nights are here, perhaps Mother Nature will give us a show this year.

I had a busy but fun 10 days at the 80<sup>th</sup> PSA Annual Conference in Salt Lake City. I didn't get to go on any tours this year, my back just wasn't ready for those. I did see some wonderful presentations. In fact, Lisa Langell is scheduled for Nature Visions this year. Most of the presentations I attended were about motivation, creativeness, and inspiration.

Nature Visions is this month. I'm hoping most of you will be attending the sessions. For our new members, you should definitely try to attend at least one day if not the whole weekend.

There are great sessions for you to check out. NIHCC members usually do very well in the juried exhibit, I'm sure this year will be no different. Be sure to congratulate them at the November meeting.

I'm still looking for volunteers for the travelogues, April through next September. Let me know if you're interested.

I'll be out of town on our November meeting date. Have a wonderful Thanksgiving.

The best way to learn and meet other members is work with us! Without volunteers, we would not have a camera club. Thank you to all of our volunteers.

*Linda Eisenstadt*





# PSA Rep Rap November 2018 By Dick Sprott



As I write this, Margaret and I are at our PA cabin resting up after the five day drive back from Salt Lake City (SLC), the site of this year's PSA conference. The drive featured snow in the Rockies and rain all the rest of the way back. The scenery was probably lovely and we would have enjoyed it if we had been able to see it! But even lousy weather coming home could not take the shine off a really good conference. The speakers were good and SLC is a very interesting city. Getting to hear the Tabernacle choir and orchestra was a real treat. But what really made it fun for me was the number of times the NIHCC was recognized on the screen at an award meeting or in the print gallery. I got to show the website contest results, where we had a second place finish. Then the newsletter results were shown. Cameraderie won the Arthur P. Hendricks Memorial Award as the best of all the entries. During the presentation of the newsletter awards and showing of newsletters on screen, Cameraderie was shown several times, each time with Nick's front page. It was fun to watch. I am looking forward to presenting Diane with a very nice award at the November meeting. Jim Turner and Nick Raymond had prints displayed in the print gallery. Our Mid-Atlantic Chapter won first runner up in the Chapter Showcase competition. Nick and Jim each had a print that contributed to the Chapter's winning entry.

Then of course, there was the omnipresence of Linda Eisenstadt, the catering czar for the conference. Refreshments at the various receptions, lunches, meetings and the banquet used to be a source of gripes, but not since Linda took over. Linda's obvious rapport with hotel staff and wise choices of goodies keeps the crowd happy. This is no small feat since events overlap and attendees come from all over the country and

world with different tastes and expectations. In recognition of her exceptional service Linda received the PSA Early Achievement Award, which is presented to a relatively new member of three to six years who has contributed significantly in several photographic areas such as teaching, enlisting new PSA members, creating programs, and by demonstrating competency and leadership.

Wearing one of my other PSA hats, I am a member of the Progress Award Committee. This committee chooses an awardee who has made a very significant contribution to photography. This year's winner was Philippe Kahn, the inventor of the cell phone camera. As his PSA host, I was supposed to introduce him for a lecture and at the awards banquet, but due to an emergency in his wife's family, he was unable to attend. I used a vimeo that describes how he invented the cell phone camera. It is accurate, short and fun to see.

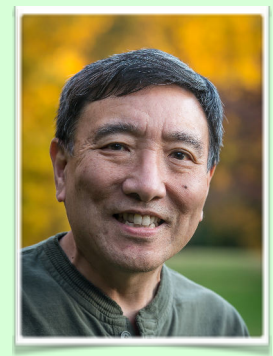
You can find a link to it on the PSA website under the conference tab (<https://psa-photo.org/index.php?2018-progress>) or at <https://vimeo.com/221117048>



Linda receiving the PSA Early Achievement Award



# NATURE VISIONS REPORT BY DAVID TERAO NOVEMBER 2018



## See You at the 2018 Nature Visions Photo Expo!

Just a few more days until the 2018 Nature Visions Photo Expo scheduled from November 2nd through the 5th at the Hylton Center for the Performing Arts on the George Mason University—Manassas campus. Hope to see you there!

Some last minute information:

**NVPE will open at 8:30 a.m.** on Saturday and Sunday instead of 9 a.m. to accommodate photographers. And, don't forget to turn your clocks back one hour at 2 a.m. on Sunday, Nov. 4th, when Daylight Saving Time ends.

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## Photo Competition Results

The NIHCC had a total of 55 images juried into the 2018 Nature Visions Photographic Exposition - 42 in the nature categories and 13 in the photo art category. Thanks to all NIHCC members who entered and congratulations to the members who had entries juried into the competition. The following NIHCC members were juried into the photo exhibition including those who submitted under another club (\*):

David Blass	Dale Lewis	Stan Collyer
John Norvell*	David Terao	Kay Norvell
Jim Turner	Malgorzata Klosek	Guillermo Olaizola*
George Lea	Kate Woodward	Nathanael Lee
Diane Poole	Margaret Sprott	Karen Goldman





# Competition Winners

## October 2018

### Topic: Nature



#### **Novice Digital:**

First: Rebecca Doran "Morning Mist Potomac River"  
Second: Nancy Axelrod "Sunrise Over Mt Bromo"  
Third: Karen Goldman "Showy Egret in Surf"  
HM: Nathanael Lee "Mara Sunset"

#### **Advanced Digital:**

First: Guillermo Olaizola "Milky Way Zion"  
Second: George Lea "English Rose"  
Third: John Norvell "Pine Martin at Home"  
HM: Dale Lewis "Lotus Flower"  
HM: John Norvell "Lonesome Bear"  
HM: Kay Norvell "Alaskan Cotton"  
HM Kay Norvell "Brown Bear Cubs"  
HM: Coriolana Simon "Datura Study 12 Fatal Embrace"

#### **Novice Color Prints:**

First: Karen Goldman "Pink Pop-Up Ostrich"

#### **Advanced Color Prints:**

First: Corialana Simon "Love in the Mist"  
Second: George Lea "Canadian Rockies"  
Third: Douglas Wolters "Palm Bark"  
HM: Dale Lewis "Polar Bear Playing in Water"  
HM: John Norvell "Grizzly Cub in Flower"

#### **Advanced Monochrome Prints:**

First: Douglas Wolters "Cascades"  
Second: Kay Norvell "Marianne Glacier"  
Third: Diane Poole "First Sign of Spring in Black and White"  
HM: Gosia Klosek "Whitened Valley"  
HM: John Norvell "Mohawk"

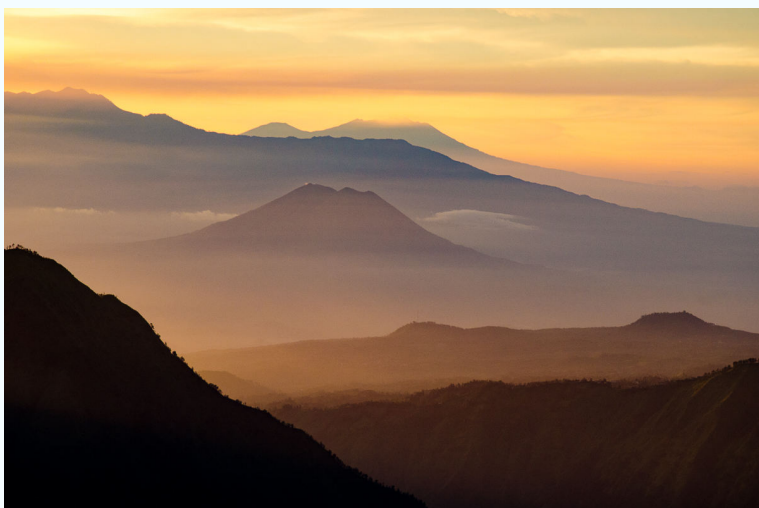


**First Place: Rebecca Doran**  
**“Morning Mist Potomac River”**

I arrived at the river's edge at sunrise in late October and was surprised and immediately enchanted by the mist rising from the water. I had never seen mist like that before up close. That morning became all about the mist for me — how it moved and changed what I was seeing and its interaction with the water and the landscape. The photo was taken with my Nikon on a tripod, 135 mm, f11, ISO 100, 1/5sec

**Second Place: Nancy Axelrod**  
**“Sunrise Over Mt Bromo”**

It was worth waking up at 3 in the morning in a freezing cold room to drive in a 4 wheel vehicle to view this spectacular sunrise in Java, Indonesia! Shot with a Nikon D7000 with a Nikkor 18-105mm lens at 90mm (135mm equivalent) f/9.0, ISO 2000, 1/200 sec.



**Third Place: Karen Goldman**  
**“Showy Egret in Surf”**

In July 2018, I photographed this egret as it landed in the surf at Marina del Rey, CA. It was one of several egrets feeding on sand crabs that morning. Nikon D7200, Nikkor 300mm Phase Fresnel prime lens + AF-S Teleconverter TC-14EIII (420 mm total), f/8, 1/2000s, ISO 250.

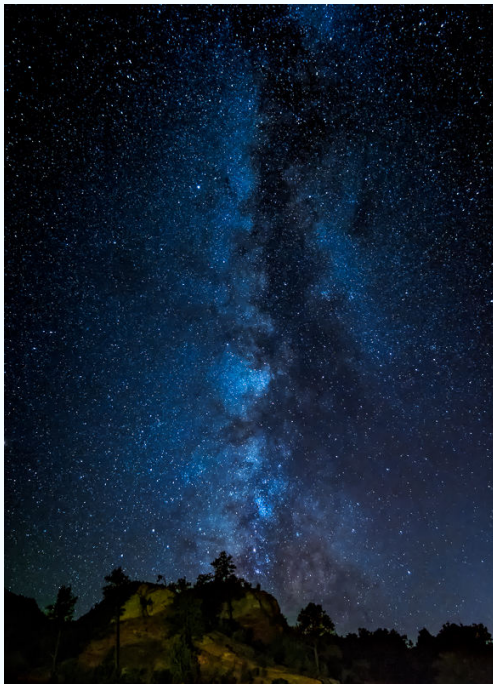




**HM: Nathanael Lee**  
**“Mara Sunset”**

The photo was taken during one of the sunrise safari tours at Maasai Mara.  
1/125s, f/8.0, ISO100, 135mm.

**Digital Advanced**



**First Place:Guillermo Olaizola**  
**“Milky Way Zion”**

I shot this image on September 14, 2018 at 1:13 AM on a spot about one mile from the east entrance of the park. To illuminate the landscape on the foreground I used the Low Level Landscape Lighting technique described in the website: [lowlevellighting.org](http://lowlevellighting.org). It was shot with an Olympus OMD-EM1 Mark II and a Rokinon 12mm f2 manual focus prime lens at f2, ISO 6400, 13 sec.

**Second Place: George Lea**  
**“English Rose”**

Image captured in the Abbey Gardens in Winchester, England after the rain with cloudy overcast skies. There was an entire section devoted to tea roses. I perceived this during capture in monochrome although the image was in color. Used a polarizer to control the rim specular reflection from the raindrops. Sony a7-R, Leitz Summicron 35mm f/2.0 Symmetric IV, f/5.6, ISO 200, RAW, B+H circular polarizer.





**Third Place: John Norvell**  
**“Pine Martin at Home”**

Fuji XP2 100-400@180 f5 1/320 ISO 640  
On a winter trip to Yellowstone, we visited a photo studio near the park. We saw a pine marten climb up a tree stump and disappear in a hole, probably his winter home. I waited for him to look out and took several photos.



**HM: Dale Lewis**  
**“Lotus Flower”**

The Lotus flower was taken at Kenilworth Aquatic gardens in DC on August 18, 2018 at 8:42 a.m. The flower was beautiful pointing to the sky with the sunlight shining through it. Camera setting: Canon EOS 6D, Lens 70-200 mm (f/2.8L, II, USM) with an ISO 200, f/20, 1/60 sec, 196



**HM: John Norvell**  
**“Lonesome Bear”**

Last July, we went on a photo trip with Mollie Isaacs to photograph grizzly bears. They were mostly in a wet meadow, but occasionally went out onto the mud flats to dig for clams. As we drove along the beach looking for bears, I got this image of a one bear walking out to the clamming area. Fuji XP2 100-4--@100 f13 1/1000 ISO 800.



**HM Kay Norvell**  
**“Alaskan Cotton”**

These fluffy flowers were quite common in the Glacier Bay area. Distant fields looked like they were covered with pink snow. Fuji XT1 18-135@100 f18 1/90 ISO 400.



**HM: Kay Norvell**  
**“Brown Bear Cubs”**

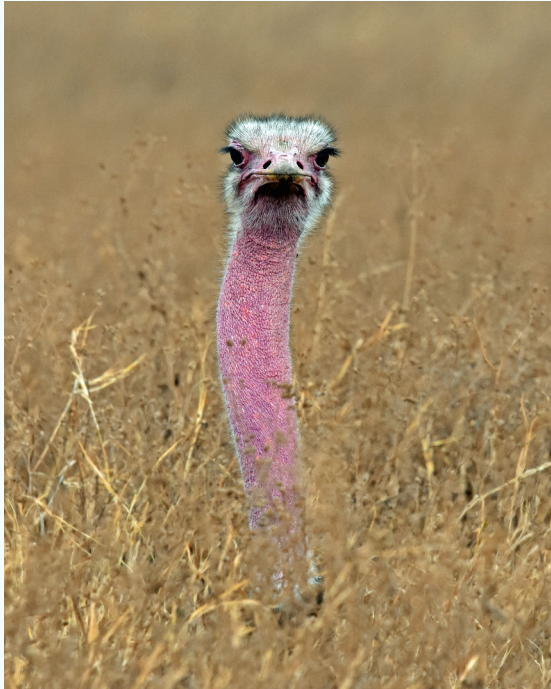
Fuji XT1 100-400 @120 f8 1/100 ISO 500  
 These playful cubs were coastal Brown Bears in Lake Clark NP in Alaska.



**HM: Coriolana Simon**  
**“Datura Study 12 Fatal Embrace”**

The datura, or deadly angel's trumpet, opens its heavily perfumed blooms at night. By the next morning, the blossoms are finished. All parts of the plant are extremely toxic. Shamans around the world, however, cultivate these flowers and use them to enter hallucinogenic trances. (Don't try this at home.) For several summers, I grew daturas in my front yard so I could photograph them at night when they opened. I photographed this all-white single blossom (as opposed to the yellow, apricot, or purple and white doubles) with a Canon 5D Mark II and a Canon 100mm macro lens on a Really Right Stuff tripod. With the remote in my right hand, I lit the flower with a small dimmable LED panel in my left hand.

## Novice Color Print



### **First Place: Karen Goldman “Pink Pop-Up Ostrich”**

In August 2016, I photographed this ostrich from a safari vehicle in Ngorongoro Crater, Tanzania. The bright pink neck is that of a male during the breeding season. Nikon D7200, Nikkor 300mm Phase Fresnel prime lens, f/7.1, 1/800s, ISO 800.

## Advanced Color Prints

### **First and Second Place Images Not Available**



### **Third: Douglas Wolters “Palm Bark”**

Shot at the Rawlings Conservatory in Baltimore with a Tamron 180 Macro lens mounted on a Canon EOS 5D Mark III, >4 sec at f/29, ISO 200.



**HM: Dale Lewis**  
**“Polar Bear Playing in Water”**

I walked 10 min to the Bronx Zoo from my brother's apartment in the Bronx. I was surprised to see all the beautiful animals. However, I was attracted to the polar bear playing in the water. The photo was taken on October 7, 2017 at 11:03 a.m. Camera setting: Canon EOS 6D, Len 70-200 mm (f/2.8L, II, USM) with ISO 1250, f/5.6, 1/1600 sec, 280 mm. I was sad to learn that the polar bear was euthanized at the age of 26 on December 28, 2017 due to health issues.



**HM: John Norvell**  
**“Grizzly Cub in Flower”**

On the Alaska trip, we saw mother and 2 cubs. One of the cubs lagged behind in the brush and suddenly stood up to look around for mother. Fuji XT2 100-400@400 f5.6 1/1000 ISO 1250.

## Advanced Monochrome Prints



**First Place:First: Douglas Wolters**  
**“Cascades”**

Shot at Great Falls at 4:00 in the afternoon with the help of a Singh-Ray variable neutral density filter with a Canon EF 300 mm f/4L lens mounted on a Canon EOS 7D, 1/15 sec. at f/ 9.0, ISO



**Seond Place: Kay Norvell**  
**“Marianne Glacier”**

Fuji XT! 100-400@100 f6.4 1/1000 ISO 200  
We took a tour boat up to this glacier is at the end of  
Glacier Bay in Alaska.



**Third: Diane Poole**  
**“First Sign of Spring, in Black and White”**

I took this image with my iPhone after a run a few years ago. I have always loved the way the Crouses have made their own composition.



**HM: Gosia Klosek**  
**“Whitened Valley”**

The picture was taken in the morning after overnight snowfall made the world white and bright. Converting to B&W made this image more dramatic than the color original, by contrasting the darkness of the blue sky against the white peaks.

Nikon 40mm ISO 200 f/10 1/500sec



**HM: John Norvell**  
**“Mohawk”**

Fuji XP2 100-400@400 f8 1/1600 ISO 1250  
One of the grizzly bears we saw in Alaska was this very large, mean-looking bear. He had several scars and was nicknamed "Mohawk".

# Topics for 2019 for the NIH Camera Club



## January 8, 2019

**Landscapes** - Qualifying entries are pictures that portray various aspects of natural plant and animal life in a living state, that illustrate the natural features of land and sea or that reveal certain natural phenomena, such as cloud formations, light refractions (sunsets, auroras, etc.), precipitation, frost, or fire, but which do not show the obvious hand of man, e.g. fences or paved roads. Photos of domestic plants or animals would also qualify.

## February 12

**Architecture** - Photos in which buildings, interiors, ruins, bridges, or any other man-made structures are the principal interest. The photographer may isolate aspects of the subject to emphasize design portions. Buildings are prime examples but other subjects having strong design elements of an architectural nature are appropriate as well.

## March 12

**Photojournalism** - Storytelling pictures or people doing things where the activity itself is the theme.. PSA description: Photojournalism shall consist of pictures or sequences with informative content and emotional impact, including human interest, documentary, and sport news. The journalistic value of the photograph shall be considered over pictorial quality. In the interest of credibility, photographs which misrepresent the truth, such as manipulation to alter the subject matter, or situations which are set up for the purpose of photography, are unacceptable. The only editing that can be done includes cropping and color correction that could be done in a darkroom.

## April 9

**Decay, Detritus, Abandoned things**- Any photograph may be entered where the main subject is easily seen in a discarded or abandoned state or shows a general sense of abandonment. Examples include but are not limited to: abandoned buildings (either individual rooms or the whole building, interior or exterior), cars or other items found in a junkyard, or crops left to wither in the field. Images of objects that have been abandoned or fallen into disuse (cars, buildings, factories, etc.)

## May 14

Workshop: Improving your travel photography





## November 13: **Still Life**

Images of inanimate objects in a static state. For example, flowers in a vase (but not growing) or fruit in a bowl (but not on a tree) would be appropriate subjects. The image may be of an arranged or a found subject.

### **Clifford Wheeler : Judge**

This month, Clifford Wheeler will be our judge for the still life competition. Clifford majored in photography and graduated from the Corcoran School of Art in Washington DC with a B.F.A in 1981. Soon after graduation, he established a small studio business photographing artwork of painters, sculptors and printmakers. Clifford was then offered the opportunity to become a member of the Torpedo Factory in Alexandria, VA where he installed their monthly exhibitions. Thirty years later, he functions as lead installer of exhibitions for many area galleries and museums, designing and installing exhibitions in all media, but still prefers specializing in photography exhibitions.



As Clifford says, “Making photographs has always been an opportunity to both capture a moment when the unique combination of light and form best reflects the essence of the “thing itself,” and the technical challenge of actually creating something tangible...something that can be held in the hand and shared between individuals. I often do this for no other reason than sentimentality itself. Using photography to explore this world into which I was born, sometimes I’m left feeling like a writer learning the meaning of the words I will use to tell a story.”

# Famous Photographers

## By Stephen Levitas

#34 November 2018 Cameraderie

Irving Penn (1917-2009)

Part V: Beauty



This is the last of five articles on Irving Penn. This article covers his photography under the category of beauty.

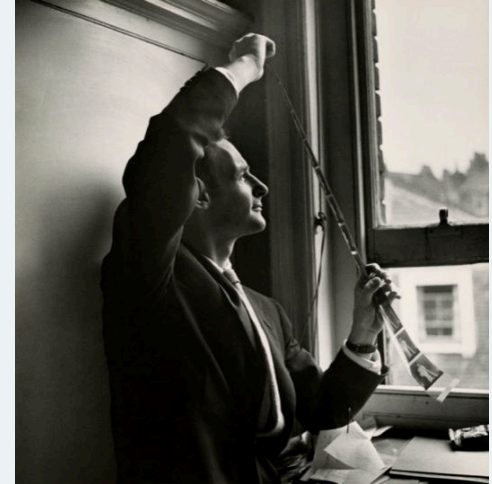
Just as reminder, this is the Irving Penn Foundation website:

<https://www.irvingpenn.org/artwork/>

I encourage you to look at all the images there, in the eight categories: Portraits, Small Trades, Still Life, Fashion, Beauty, Nudes, Travel, and Documentary. All are worth studying, and I am discussing the first five, in five articles. The website also has an excellent biography and chronology of Penn's life and work.

Here is the link to the Wikipedia article on Penn:

[https://en.wikipedia.org/wiki/Irving\\_Penn](https://en.wikipedia.org/wiki/Irving_Penn)



Two issues ago, in the article on Penn's still lifes, we observed his penchant for memento mori—reminders that life is limited and that eventually we all decay and die. Penn brings this out in full force in his images of “Beauty.” The Irving Penn Foundation might as well have titled this section of their website “Beauty is Temporary.”



Gold and Silver Make-up (B),  
New York, 1985

This image is full of inversions and unexpected elements. Instead of two large colored dots on the cheeks (like clown makeup), the cheek dots are windows through the makeup to the normal flesh. Pointed at these are natural-color fingers. The center dividing line is a thin strip of natural flesh as well. The model's lips, brows, and eyes show a disturbed mood (brilliant posing), and her eyes do not look in the same direction. Her eyes are red in the corners, adding to the disturbed mood. This is hardly beauty, although she is clearly a beautiful professional model. This is a death mask, full of divisions and glimpses into pain and disturbances.

Penn does not light this face as a portrait, with a light and a dark side, but with a single center-aimed light, concentrated on the forehead, like a painful blow to the face.



This image speaks for itself (my word play is intended; the bug is speaking into the ear of the model). This obviously beautiful woman will eventually feed the insects, and the insect is even announcing it, and may soon in fact enter through the ear canal. This is really quite grisly.

Bug in Ear (A), New York, 1959



“All is vanity,” this says to me, “and then we die.” The white face is a sign of a dead person or a ghost. Makeup, normally used to create beauty, is here reduced to simple smears, a complete failure of purpose. I can’t tell if the model has color smears directly on her, or if a monochrome image has been painted on, and then re-photographed. Note the deep shadows on the sides of the head and under the chin. A single strong light has been used, above and a little off-center.

White Face with Color Smears, New York, 1986



Again, Penn reminds us that we age and decay. He has even included five acupuncture needles in this catalog of foot care products. Note the alternation of the toes with the materials, making a rhythmic composition, which then descends the foot right/left/right/left, and finally center. So original!

Foot Care, New York, 1990

# Do You really Need a Camera?

## Part II

By George Lea



Acutance and resolution, the basic elements of an image, were described in Part I. How then, do we preserve this information for viewing? We need to know a few facts, just enough, concerning human vision for our purpose.

We graphically represent the eyeball as a hemisphere.

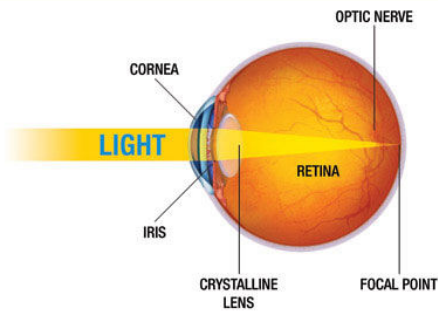


Figure 5

A ray of light enters passing in succession through the cornea, the iris, a *lens*, and vitreous humor, finally impinging (focused) on the retina – a curved surface. The cornea, together with a lens, focuses the light ray and this is, in fact, similar to **the lens** in our camera. The iris plays an identical role in both the eye and the camera by controlling the amount of light reaching the retina and the film plane, respectively.

The ciliary muscles that attach the lens are stretched in the relaxed position, so that the lens curvature is flatter, less curved, around the edges. This improves the image quality near the edges – and we have today’s “new” asymmetric camera lenses, \$\$\$. The manufacturing precision has partially caught up with known science.

The curved retina is more interesting, as this is where all the information-gathering sensors are distributed and is the focal plane.

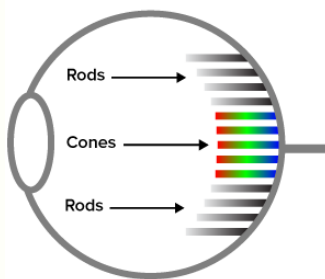


Figure 6

Embedded are the light sensitive sensors, rods and cones. *Rods* have only monochrome response for low level of luminescence. On the other hand, there are three types of *cones* (**R**, **G**, **B**) for high luminescence response – with twice as many **G** cones than either **R** or **B**. Therefore, we do not perceive color in deep shadows. Color contrast does change according to brightness (known as the Purkinje shift). So, remember to always select colors in bright daylight.

Many years ago, Petzval showed that a curved lens couldn’t focus flat objects onto a flat image plane; rather the lens focuses on to a curved surface. How fortunate that our retinal curvature matches the Petzval curvature, resulting in excellent focus. If we want to have a flat focal plane, then corrective glass/ lens elements must be added to force the issue.

The distribution of rods and cones are not uniform, the most densely packing region being near the fovea, which lies close to the optical axis of our lens. Therefore, our vision is not uniform, the best resolution and acuity will be observed in this center area. By the way, the spectral color response of the eye’s cones does not exactly match our camera **RGB** channels, with **R** being the worst. Our red cone response is more tinted yellow in comparison to the camera color space.

The sensitivity of rods and cones to light intensity is nonlinear. We are more sensitive to low light (cat-like) than bright light. Jumping ahead to camera **RAW capture** for a moment. RAW files are digitized files generated from a photon counter, giving rise to a voltage directly proportional to the number of light particles (photons) captured by the camera sensor. Our rods boost low light vision, while the cones suppress the overly bright highlights (a nonlinear response). Comparing between our eyes’ nonlinear capture to that of unedited linear RAW capture – the latter appears flat, lacking contrast with low acuity.

All digital cameras capture in RAW format, meaning large, minimally processed data files that contain 99.8% of the information are recorded. Market research says most photographers view the RAW output as is, with no post edits. However, processing large files was slow and memory was expensive. The commercial solution is to edit RAW files in the camera to better showcase the product image and minimize storage - so we arrive at JPG or sJPG. In the early days of digital camera, the RAW capture is scrubbed after camera conversion to JPG, which is then recorded.

Viewing JPG images is like reading an issue of *Reader's Digest*. The information has been compressed and the fidelity of the information depends on the skill of the editor. Image software developers are *de facto* image editors. For example, color mix and acuity represented by A-brand phones are a bit different from H-brand or S-brand phones. The same goes for C-brand vs. N-brand vs. L-brand vs. O-brand camera/sensor combinations. In fact, if one compares any of these entry model cameras vs. the high-end ones – you will notice differences in color saturation. Only RAW files contain the necessary information to be **edited so as to match our original perception**.

Returning back to photography... We introduce an interplay of light rays, focus and circle of confusion, focal length, magnification, sensor size and image circle. Again, just enough details for our purpose. One fact to keep in mind, everything has a dimension; a point and a line are extremely useful mathematical abstractions, but not physical entities. On a printed page, if the lines that form the letters have no width, then there is no space to fill the ink; therefore, a blank page. We draw two lines 0.2mm apart, then there is more than sufficient included area to fill with ink and hence is visible. Likewise, the period (referred to as a point) most surely is a dot (short for a circle) – with a very small diameter, say of 0.2mm.

In part I, we estimated the lower limit of our acuity as being .0886mm viewed by a person with “normal” vision from a distance of 304.8mm to perceive an edge. We need a dimension, so a line pair including an area should work. Since our concept is rather crude – some rounding should be used. We'll round up to .09mm and then double the value to get an inscribed strip (a line pair) with a width of 0.18mm, and then round again finally to .2mm, which serves as our estimated *Circle of Confusion (CoC)* in lens-speak. When we aggregate enough of these circles to completely cover a 35mm frame (24x36mm), then we perceive a focused image. This large overall circle is referred to as the *image circle*. For the 35mm frame it is 43.27mm.

This image circle must cover the entire sensor frame or film frame. Since all sensor arrays (as well as film frames) are rectangular, the diagonal is used as the diameter of the image circle. The 35mm dimension is the industry standard for comparison; this is where crop factors of 1.5x or 2.0x arise, because some camera sensors are smaller than the 35mm base dimensions. Using a lens for a crop sensor camera on a full-frame camera will result in nice black ring around the edges. On the other hand, using a full-frame lens on a small sensor camera will give you a portion of the projected image circle; a cropped image filling the entire frame, but it is NOT a telephoto image.

It seems that we have taken a rather cavalier approach with assumptions and gross estimates. The viewing distance to compute CoC was 304.8mm or 12in and was chosen as being the most comfortable for viewing an 8” x 10” print! This choice was made, in the early 20th century and it has withstood the test of time. Geometric Optics (the fancy name for ray tracing) was used to determine most of today's lens formulas. *Lens formulas* refer to the number of individual lens elements, their curvatures, and their clustering/grouping arrangements.

What of the light rays? We perceive reflected and directly illuminated objects. A blue blazer absorbs most colors of visible light from the source (i.e., the sun) and reflects mostly blue to our eyes. This holds true for all objects that are not sources of illumination; e.g., a red cap reflects mostly red, etc. On the other hand, the light sources such as the sun or an open flame provide direct illumination with no reflections, before reaching our eyes. There is the very interesting sunrise (blue, cold) and sunset (yellow, warm) phenomena. We will not go there for now except to note that if you subtract blue and mostly green, only orange/yellow remains.

Our goal is to collect all these illuminations within a prescribed viewing area and project onto a film plane to satisfy CoC, a dot no more than -0.2mm. Recall that by aggregating a series of CoC on the film plane results in a sharp image.

Suppose we image our perceived scene as a puzzle where all the pieces are circles, with many identical diameter circles tightly compacted. Each of these circles serves as the base of a cylinder pointed toward our lens. A collection of light rays – like a hand full of spaghetti – aimed at the lens. Each of these circles is, in fact, a stack of three overlapping circles each with Red, Green, and Blue information. Recall our earlier discussion about grey scale, tone values, and edges; each of the puzzle piece contains image information.

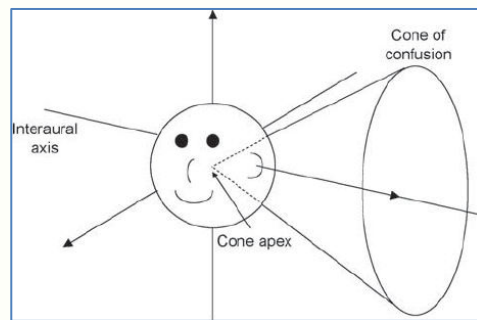


Figure 4

This collimated light rays are then squeezed by the optical system into cones, while being bent so that all the apex of the cones converges at the film plane. Again, *apex* is a point, a mathematical abstraction, so we stop at a location where the base of the individual radius of the cone is the CoC. For every circle that covers the original scene, there is a unique corresponding CoC imaged on to the film plane. This bending and squeezing is *refraction*. This process has transmitted information by projecting an image onto the focal plane.

There are numerous issues that will arise in this projection process, distortions and aberrations. These are more or less corrected by multiple lens elements, which add weight and increase size of the lens – not to mention \$\$\$. That's the explanation for descriptions of “six elements in two groups” or “eight elements in three groups,” etc. advertised by the lens manufacturers. However, more does not mean better.

Even illumination and color across the focal plane marks the quality of a lens. This means both resolution and acuity should be even across the image frame. *MTF*, or *Modulation Transfer Function*, is used to measure lens response. These are laboratory-derived results and the instructions for interpretation of MTF graphs are as lengthy as this article. However, there is a simple test you can perform to access the uniformity of your lens and sensor pairing.

Take two or three folds of a sheet of wax paper. Cover the lens, it's best to have the lens hood attached, and warp the folded wax paper to completely cover the front of the lens to prevent light leaks. The focusing distance setting is arbitrary, as no images will be involved. Point to the sun; make sure no shadows are included. Make four exposures of this backlit gray patch: minimum *f*, maximum *f* and two more in between. The gold standard is an even single tone gray image recorded by your camera.

View your captures on a monitor and notice the luminosity fall-off, as well as chromatic (color) aberrations (shifts) depending on the *f* number across the image frame. The same test can be repeated for the zoom lens, but make each set of exposures at a different zoom magnification, then compare. Remember to record the settings for comparison. These basic shifts across the image frame will be present in every one of your images and is different for each value of *f*-number, and zoom magnification.

Does all the above really matter? These artifacts are not noticeable on a phone or even on a tablet. However, they will be annoying when viewing an 8x10in or larger print. Digital editors include software corrections calibrated for specific lens that correct, but also increase noise and blur and are not as sharp. Using wide-angle lenses (less than 21mm) on a mirror-less camera is problematic due to the acute angle of the light rays near the rim of the lens. Of course, you can place a thin sheet of micro-lens over the sensor to correct for the edge aberrations for a few \$ and only for a particular lens design.

Our journey is almost home: To the viewing, recovering our initial perception of an event - we will cover in the next talk, the finale. There always remains the question: Does all this analysis, etc. really matter; soft or hard edges, resolution, acutance, color mix? For this, I will show two examples, two paintings of the identical subject, one a mirror image of the other.

During the mid-nineteenth century, a group of painters led by Rousseau, Millet, and Daubigny headed an art movement towards Realism in the village of Barbizon, near Fontainebleau in France. The English landscape painter John Constable's style served as their inspiration. Later Monet, Renoir, and Van Gogh also joined the Barbizon school as it transitioned to Impressionism.

Millet painted a pastel using black crayon on paper titled, *Noonday Rest* in 1866, which resides in the Boston

Museum of Fine Arts. Van Gogh painted oil on canvas; *The siesta after Millet*, in 1889, which is now displayed at the Musée d'Orsay. See Figures 7 and 8. Let's play technician, rather than art critic, and concentrate on the brush strokes, edges and acuity.

Notice that in Figure 7, the full tone range with fine details are captured on paper. Play of light is very much in the spirit of John Constable. There are details in the shadows.



Figure 7

*Noonday Rest* – Jean-François Millet, 1866

Figure 8 is Van Gogh's mirror image of Millet's painting – with very hard edges, almost like a HDR print. Oil on canvas cannot hold the finer details as well as crayon on paper can.



Figure 8

*The Siesta, after Millet* – Vincent Van Gogh, 1889

The same, only different – each artist had chosen a set of tools to communicate their own perception. Which one of these might be chosen as First in our monthly club competition?

# Better Query Saul Lighting for Still Life Photography By Saul Pleeter



Still life photography can be a great learning experience because you are creating rather than trying to capture an image. Also, you won't be disappointed in the mode or delayed or forced to expend money.

Still life photography is an opportunity to experiment with composition and lighting. It requires very little in the way of special equipment - but it does require practice to get the image that you want.

Tips on Photographing Still Lifes:

1. Setups - the simplest setups will do very nicely. Probably the simplest is to use a sheet or fabric material as a backdrop. Hang the material and let it drape over a table to eliminate cracks where the table meets the wall. Try to have the fabric or sheet be as wrinkle-free as possible. Wrinkles are a decided distraction. Use neutral colors without patterns to start with. Also, the knit of the fabric and fabrics that are reflective can sometimes be a distraction and should be avoided.
2. Lighting - any source of light will work when creating still lifes. If you are using natural light, a reflector or another light source such as a lamp can serve as the fill light. Two flashes, LEDs or multiple tungsten lights offer increased opportunities for controlling the lighting. These light sources may also be supplemented by reflectors where and when needed.
3. Contrasty images better emphasize texture and shape. Contrast can be directed by varying the intensity, size, or proximity of the light to the image. Essentially, if you want to emphasize texture and shape, you will need to create harsh lighting with distinct shadows. If you are using two lights - one light should be stronger than the other. At a minimum there should be 1 f-stop difference in the intensity of the key and fill lights. As the number of f-stop differences increase so will the intensity of the shadows.
4. Angles - experiment with different angles for lighting and for the camera. Side lighting emphasizes texture and shape. Lighting can be from the side, front, top, bottom or any angle. Camera can be placed above, head-on, or at any angle.
5. Depth-of-field - experiment with depth of field. Narrow depth of field works well for some images and for achieving a desired look. Large depth of field works well for other images.
6. Camera settings- use a tripod if possible. Set ISO to 100 - this will maximize color richness as well as minimizing noise. If using flash, shutter speed to be set at 1/160.

Additional avenues to explore - light painting and adding textures in post-processing.

The image may look very different in camera than on the computer.

One last word is experiment. experiment. experiment!



## National Building Museum Field Trip Monday, November 12, 2018 10:30 AM to 2:30 PM

This trip to the National Building Museum will include a guided tour of all three floors of the building which will tell us about special features of the building, give us access to some features not always open, and give you the opportunity to assess what you really want to photograph. Tripods are permitted and certainly recommended. The November 12 date is one when the museum has no scheduled events to get in the way. It is Veteran's Day so those who are still among the unretired probably won't have to lose a day.

You can find details about the building on the web at: <https://www.nbm.org/about/>

The topic for the February Club competition is Architecture, so this trip will give you a great opportunity to make images for that competition.

The museum is at 401 F St. NW in DC. It is directly across from the exit for the Judiciary Square/China Town metro Red line station. We will need to meet at the museum by 10:15 to be ready for our 10:30 tour.

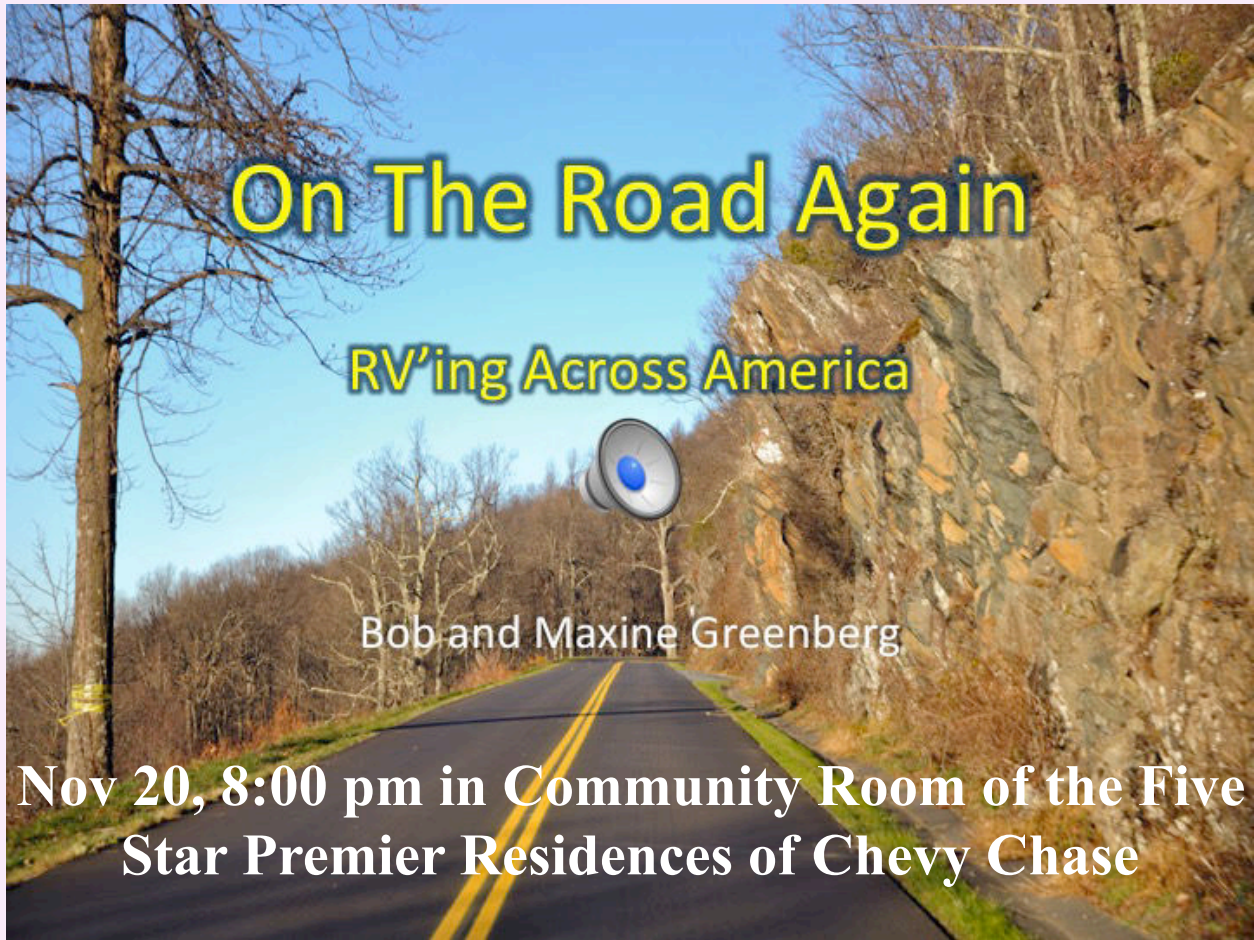
Please let me know if you have any questions and since there is a limit of 25 people for our tour, please let me know if you intend to attend.

[sprottrichard@gmail.com](mailto:sprottrichard@gmail.com)





# NIH Camera Club Presents Travelogue for November 2018



## On The Road Again

### RV'ing Across America

Bob and Maxine Greenberg

Nov 20, 8:00 pm in Community Room of the Five Star Premier Residences of Chevy Chase

### Wyoming

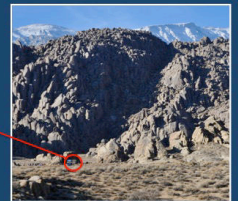


### Cleveland, OH



### California

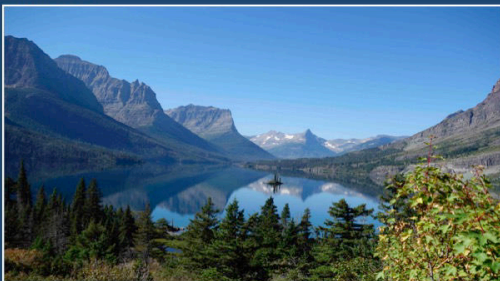
- Lone Pine and the Alabama Hills



### Montana

- Glacier NP

St. Mary Lake and Goose Isle



### Washington

- The Palouse





# Maryland Photography Alliance

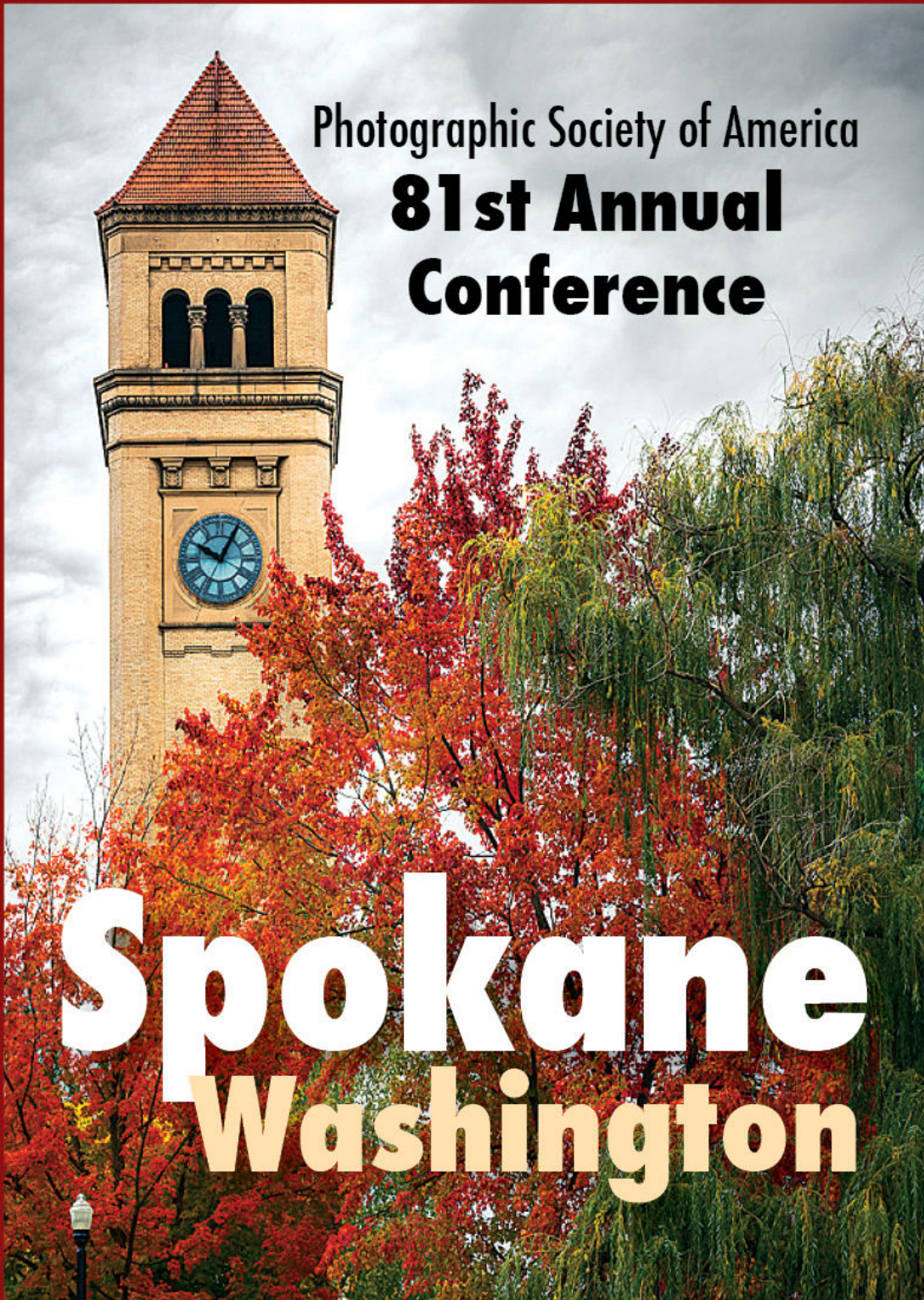
What makes a great street photograph? What techniques, equipment, compositional elements and psychology help elevate street shooting to a fine art? In this projector-driven seminar we'll explore these questions and others as we view and deconstruct the work and general approach of a variety of street masters, including Walker Evans, Henri Cartier-Bresson, Alfred Eisenstaedt, Elliot Erwitt, Diane Arbus, Sebastião Salgado, Garry Winogrand, Steve McCurry, Joel Meyerowitz, Vivian Maier, and a host of others whose work we promise you've never seen. Along the way, we'll also consider whether all great street photographers have at least one element in common: an underlying vision or personal philosophy of the world.

Skill level: beginners and advanced

Leo Howard Lubow - Classic Street Photography: What the Masters Can Teach Us  
\$125.00 Limited Seating

To Register: <https://www.mdphotoalliance.org/> and click on Events





Photographic Society of America

# 81st Annual Conference

# Spokane Washington

**September 25th – 28th 2019**

Photo tours available Sept 22- Sept 25, 2019



The NIH  
CAMERA  
CLUB

## Register on the NIHCC Website

Our Webmaster Jim Turner is working very hard to make our website awesome. If you haven't registered yet, please do! If you have any questions about the way things work, please feel free to e mail Jim and he will be able to help you with the easy



# Silver Spring Camera Club

You might be interested to see what our sister club, the Silver Spring Camera Club, is up to! Here is a link to their site. They also publish a newsletter, Cable Release, and it is available here.

<http://www.sscphotography.org/>



A Proud Member of the

**Maryland  
Photography Alliance**

<https://www.mdphotoalliance.org/>

## Club Officers and Committees

**President:** Linda Eisenstadt  
**Vice President:** Suzanne Dater  
**Secretary:** Gosia Klosek  
**Treasurer:** Stan Collyer  
**Past President:** George K. Lea  
**Program Chair:** Leonor Guillen  
**Education, Workshop:** Dan Smith  
**Field Trip Co-Chairs:**  
Dale Lewis  
Cathrine Sasek  
**Digital Czar:** Quentin A. Fisher  
Dale Lewis

**Hospitality Chair:** Margaret Sprott  
**Membership Coordinator:** Leonor Guillen  
**Nominating Committee Chair:** Margaret Sprott  
**Communications Director:** Melissa Park

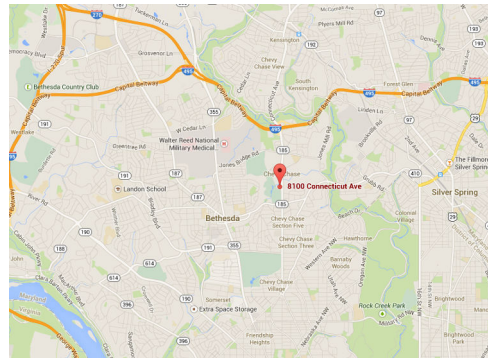
**PSA Rep:** Dick Sprott  
**Nature Visions Rep:** David Terao  
**Nature Visions Alt:** Jim Turner  
**Newsletter Editor:** Diane J Poole  
**Webmaster:** Jim Turner

**Web Address:** <http://www.nihcameraclub.com>

This newsletter is published monthly by the  
National Institutes of Health Camera Club,  
Bethesda, MD.

## Meeting Location

**Five Star Premier Residences  
of Chevy Chase**  
**8100 Connecticut Avenue**  
**Chevy Chase, MD 20815**



**Competition Night: Second Tuesday  
of the month**

## About Our Club

The purpose of the NIH Camera Club is to encourage its members to increase their knowledge, skills, and enjoyment of photography by holding meetings, classes, lectures, and demonstrations of the various phases of photography, and conducting workshops, photographic competitions, and other photography related activities. **Membership is open to all, not just NIH employees.**

Meetings are normally held on the second Tuesday of each month from September through June at 7:00 P.M. at the Five Star Premier Residences on Connecticut Avenue in Chevy Chase, MD. Special events will be held at The FAES Social and Academic Center 9101 Old Georgetown Road, Bethesda, MD 20814

Complete membership form (find on the web site and attached to each newsletter or pick up at a meeting). Please note that you must be a member to compete in the monthly competitions.

Mail membership form and check to the Treasurer:  
Stan Collyer 8817 Belmont Road Potomac, MD 20854 or submit at a regular meeting.  
**You do not have to work at NIH to join the club.**

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# MEMBERSHIP APPLICATION and RENEWAL FORM

National Institutes of Health Camera Club (NIHCC)

Membership in the NIH Camera Club historically consisted of current and former NIH employees and their families. The club is now open to anyone who has an interest in photography. The Treasurer collects Camera Club dues in September.

DATE: \_\_\_\_\_

NAME: \_\_\_\_\_

HOME or WORK ADDRESS: \_\_\_\_\_

PHONE #: HOME \_\_\_\_\_ CELL \_\_\_\_\_ WORK \_\_\_\_\_

E-MAIL ADDRESS \_\_\_\_\_

\*\*\*\*\*

FEES (please check the appropriate line(s):

\$\_\_ Single membership: \$40

\$\_\_ Family membership (Family members must live in same household):

2 family members: \$64      3 family members: \$88

TOTAL AMOUNT PAID \$ \_\_\_\_\_ Cash \_\_\_ Check # \_\_\_\_\_

\*\*\*\*\*

MAKE CHECKS PAYABLE TO: NIH Camera Club

SEND TO: Stan Collyer, Treasurer  
8817 Belmart Road  
Potomac, MD 20854  
H-301-299-6955

\*\*\*\*\*

Please indicate how you would like to be involved in NIH Camera Club activities:

- |  |   |
|--|---|
| <input type="checkbox"/> Help find program speakers/judges             | <input type="checkbox"/> Assist with field trips or workshops |
| <input type="checkbox"/> Assist with bi-annual and other social events | <input type="checkbox"/> Help with educational activities     |
| <input type="checkbox"/> Help to welcome new members                   | <input type="checkbox"/> Help with club outreach activities   |
| <input type="checkbox"/> Help with club exhibitions                    |   |
| <input type="checkbox"/> Other _____                                   |   |

\*\*\*\*\*

\*\*\*  
WAIVER

I hold the NIH Camera Club (NIHCC) and each member of NIHCC, individually and collectively, blameless for any injury that may occur to me or my guests, or my property while participating in any NIHCC activity or event.

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date