THROUGH THE LENS

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Pros and Cons of Using Circular Polarizers

By Candace Dyar - Printed with written permission from Digital Photo Secrets

A circular polarizer is arguably the most useful filter you can own and the most important must-have tool for instantly improving images while out in the field. Unlike other filters, a polarizer's effects cannot be mimicked in Photoshop. Circular polarizers work by blocking certain light waves from hitting the camera lens. Rotating the polarizer allows certain light waves to pass through, while blocking other light waves. Aside from providing protection for the front lens element, a polarizer can transform an otherwise lifeless scene into an image with richness, saturation, contrast, and depth.

For beginners, circular polarizers are very easy to use and require only a simple two-step process of attaching the filter to the front of your lens, then rotating clockwise or counter-clockwise to control the amount of polarization. I have been using B+W Circular Polarizing Filters for several years now and cannot praise enough the quality and durability of their filters. At a price-point of around $150-$200 (or more for higher-end quality), I find that they are an excellent value. In this article, I share some of the pros and cons of using circular polarizers in the field along with some examples of RAW unedited images I've taken. I also mention some things that you should look out for when using these polarizers.

Reducing Reflections and Enhancing Colors

Notice the difference between these two waterfall images. The left image without a polarizing filter has reflections and lighter colors, while the one with a polarizing filter appears to have richer, more saturated colors, no reflections, increased contrast, and blacker shadows. Polarizers remove reflections from non-metallic surfaces which makes them very useful when photographing water or wet surfaces such as the foliage in the image. Most importantly, it reduces reflections from water droplets in the air which we call atmospheric haze. Polarizers cut through haze and work to reduce polarized light and glare, making things appear more saturated, as we're able to see again with the foliage. In general, more reflective objects see a greater increase in saturation when using these filters. Polarizer filters also have an added benefit for waterfall photography – they reduce the total amount of light reaching your camera sensor. When you're taking longer waterfall exposures (usually from 1/2 to 1/8 second), a polarizer can take the place of additional light-reducing filters needed to shoot that slowly in daylight.

In the images above of Mount Hood overlooking Trillium Lake, you're able to see how the mountain stands out more and appears prominent, versus without the polarizer. The polarizer can be rotated to cut reflections in water or on the surface of ice, revealing what is underneath such as rocks, fish, or bubbles trapped beneath the surface. As you rotate your polarizer, the reflection is replaced by the bottom of the lake and what is below the surface; keep turning, and the reflection returns. In lower light conditions such as this, it's important to keep in mind that a polarizer costs you anywhere from one to two stops of exposure, depending on the type of polarizer and the amount of polarization you manually dial in. Since aperture controls depth, you're able to compensate for the lost light with a longer shutter speed or higher ISO. In this type of situation a tripod is also extremely handy. It's important to note that shadows are significantly darkened and contrast is increased with a polarizer present. In the images here, it is especially noticeable in the forest area and treeline near the mountain. Multiple exposures can be taken in order to compensate for this (via exposure blending), along with shadow recovery in camera RAW and post processing.

Making Clouds Pop and Darkening The Sky

These images of the Tatoosh Range during an autumn evening illustrate another advantage of using a circular polarizer. You're able to see here how the clouds seem to pop and appear more defined when using the filter. The sky is also a deep blue due to the filtering of atmospheric haze. However, there are also downsides to using the polarizer here. The effects of the filter are more pronounced when shooting away from the sun and are most extreme at 90 degrees from the sun. The effect of a polarizing filter is not uniform across the whole frame; it gradually tapers off on both sides. This non-uniformity is even more prominent when using a wide angle lens, which is what many people use for shooting landscapes. Therefore, when you use an ultrawide lens, parts of the sky can turn deep blue to almost black while other parts of the sky at a smaller angle to the sun can be light blue. In other words, this is a typical example of overpolarizing an early evening image. You can't effectively polarize the entire sky with a wide angle shot, so the result is that you wind up with a darker blotch towards the center of the image. The best plan is to compensate for this banding effect by dialing back the filter to a point where you're still getting the effect of saturated and improved colors, but without overly distorting the sky color. It's a trade-off but worth doing in the field, as correcting an image with overpolarized sky can be more complicated and time-consuming in post-processing. The end result is that you'll have much better colors using the polarizer, even if not to its full effect. Another consideration worth mentioning is that vignetting can often occur when using a circular polarizer. Sometimes the frame of a screw-on circular polarizer is thick enough to show up in the corners of images taken with wide-angle lenses. Its edges may block some incoming light, causing darkening around the corners of the photo. Thankfully, this is a relatively easy fix in post processing. You can also opt on a slimmer (but generally more expensive) model where there's less of an issue.

Erasing and Emphasizing Rainbows

The images above from the Alabama Hills illustrate how a rainbow can disappear from a scene with the use of a circular polarizer. This happens because rainbows are caused by glare when the sun's rays hit a pocket of moisture. While this may be a disadvantage when shooting in such conditions, polarizers can be good for shooting rainbows as well. If the polarizer is spun in the opposite direction, it can effectively increase the amount of glare in a scene more than the natural eye sees, therefore making the rainbow even more prominent and intense. If rotated just right, a polarizer can make a rainbow stand out more and enhance the color and contrast by darkening background clouds. When trying to include both ends of a rainbow, a wide angle lens is usually required. In this case, the scene or rainbow may appear uneven with a polarizer and the rainbow could disappear at some positions. It's also very tricky to stitch a panorama taken with a polarizer. Each photo gets polarized differently and the final photo of the stitched images can have unevenly colored skies.

I hope that these pros and cons are somewhat helpful when exploring the use of circular polarizers. If you have not already invested in this type of filter for your camera, hopefully these pointers encourage you to do so, or encourage you to give another try to the one that you already have collecting dust somewhere. Your photos are sure to substantially improve, especially in regards to waterfalls and landscapes.

About the author: Candace Dyar is a landscape and nature photographer based in Washington State. Her background in art history significantly contributes to her overall artistic vision and she is known for portraying a painterly type of style within her work. In addition to landscapes, Candace's portfolio also includes intimate images of flora and fauna, and she is passionate about exploring and photographing the diversity of wilderness areas in their entirety. Her goal as a photographer is to reach viewers on an emotional level, while also spreading awareness of the necessity and vitality of the natural world.

Arlington Camera Club Programs 2016-2017

9/7/16	Tom Snitzer - Water Ninja
9/21/16	Fred Drury - Underwater photography
10/5/16	Competition
10/19/16	Cubs in the World Series and Image critiques
11/2/16	Will Clay - What makes a good photograph
11/16/16	Mort Lerman
12/7/16	Competition
12/21/16	Jack Carlson
1/4/17	Bill Skinner
1/18/17	Tom Campone
1/20/17	Post Holiday party and Raffle
2/1/17	Competition
2/15/17	Jeffrey Van der Koon
3/1/17	Tamron - Denis Nervig
3/15/17	
4/5/17	Competition
4/19/17	
5/3/17	
5/17/17	Results - "Picture in the Park" challenge; Results members photos taken at outings.
6/7/17	End of year competition judged by all ACC members.

The Answer Man

Today's Question

My understanding has been that prints made on matte surface, inkjet printing papers are generally more archival than glossy surface papers. Do you agree? And how, if at all, does the coating on coated matte papers influence the print's life expectancy? Answer: There are a variety of factors that impact overall print longevity. However, in general matte papers will provide the greatest longevity. Glossy papers will generally provide the least longevity, and coated matte papers can be expected to provide longevity that falls somewhere in between.

More Detail:

Let's first assume that all other factors are equal in this case. That's not a small assumption, of course. There are factors related to the composition of the paper substrate, the degree to which a given paper is acid-free, and many others. However, among the various factors that impact print longevity is how close the inks ultimately sit to the surface of the paper. The closer the inks are to the surface, the more exposed those inks will be to environmental factors. Glossy papers generally cause inks to stay at the surface rather than being absorbed. As a result, the inks are more exposed to environmental factors that can cause the inks to fade over time. In other words, with a glossy surface there is a greater risk that the print will fade relatively quickly. Matte papers, on the other hand, absorb the inks so that the inks can be thought of as somewhat "sitting below the surface" of the paper. That helps to protect the inks, so they are not as prone to fading. Of course, that also reduces the overall color saturation and tonal contrast of the print. A coated matte paper will generally fall somewhere in between. The matte paper itself is more absorbent than a glossy paper would otherwise be. paper itself is more absorbent than a glossy paper would otherwise be. However, the coating causes the paper to behave a little more like a glossy paper than a matte paper. Thus, in general I would expect coated matte papers to have a print longevity that is longer than that of a glossy paper, but shorter than that of an uncoated matte paper

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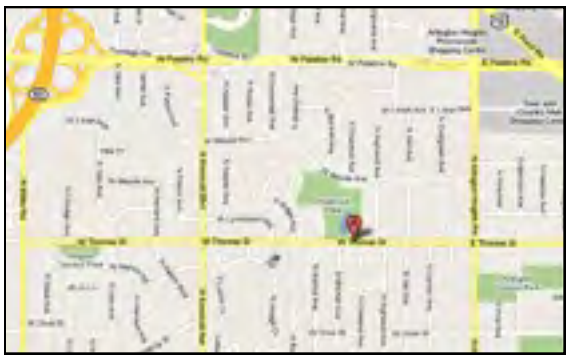
ACC meets at the Christian Church of Arlington Heights, 333 W. Thomas Avenue, three blocks west of Arlington Heights Road, across from Hasbrook Park on the 1st and 3rd Wednesday of the month at 7:30 p.m.



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"Why the funny color?”

Did you know that whites only really look white because we expect them to? Yes,that’s a bit of an over-simplification, but the fact is that the light can dramatically change how the color white appears to your camera, even though to you it might not seem anything other than a basic white.

Your eyes know that a white t-shirt or a piece of paper is meant to be white, so it doesn’t really matter if you view it at sunset or indoors or outside in the shade—it’s going to look more or less white to you because that’s what you expect. If you take a photo of that same white t-shirt or piece of paper at sunset, then indoors, then outside in the shade, however, it may not actually look like the same white in every single shot. Why not?

Because the actual color of “white” depends on the color of the light. At sunset, the light is a warm orange color, and it will make everything it hits look slightly orange.

Likewise the color of artificial lights is also warm. Outside in the shade, however, the light is a lot cooler, so white will look slightly blue. And under fluorescent lights white may look green, and not in a good way.

The reason you don't notice this in every photo is because your camera has a feature called "auto-white balance," which is designed to evaluate every scene and figure out where the white point is. It will then balance the colors in the scene so that the whites will look white. For that indoor photo, it will compensate for the yellowish cast of the light by adding blue. In the shade, it will compensate for the bluish cast by adding yellow. But it doesn't always guess right. Like your autofocus system, your auto white balance system is only as good as its best guess. So in scenes where there isn't any white, for example, it may guess wrong and you'll get a color cast.

Auto white balance is pretty good most of the time, but this is a good example of why you should always take a test shot whenever you change locations, to test not only for exposure but also for white balance. If you're in a situation where your camera is capturing an unwanted color cast, try manually setting your white balance according to the conditions ("incandescent" if you're indoors, "daylight" if you're outdoors, "shady" if you're in the shade, etc.

If you're feeling creative, you can use your white balance to actually add color to a scene—for example, if you're photographing a beautiful sunset and would like to deepen the reds and oranges, you can select the "cloudy" white balance setting, which will put additional reds and oranges into the photo.

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"Why isn’t the sky blue as I remember it?"

A few things in life are constant. The sun rises and sets every day, the moon orbits the Earth and the sky is blue. Except in some of your photographs, or if you live in England. If you live in England, your problems are a little more complicated, however if you're taking pictures on a bright, sunny day the reason why you don’t always get that brilliant blue color in the sky is actually pretty simple. In fact the answer has not to do not with the color of the sky, but with the intensity of the light.

If you take a photo on a bright day, especially close to noon, you're going to get a sky that looks very pale blue or maybe even has no color at all. The reason why this happens is because of dynamic range. Dynamic range is the term photographers use to describe the variation in tones between black and white. When the dynamic range is very broad, like it is at midday on a sunny day, there may be as many as 12 (or more) stops of difference between those shadows and highlights. On a cloudy (or more) stops of difference between those shadows and highlights. On a cloudy day, you don't have this problem—the dynamic range on a cloudy day can be as low as three stops. But of course you don’t get blue skies on a cloudy day.

The problem with that broad dynamic range is that your camera can't cope with it, so it ends up blowing out the highlights (making them overly white) and deepening the shadows. And guess what the brightest highlight in many scenes is? Yep, it's the sky.

So the best way to handle this problem is to simply not shoot photos that contain the sky on a bright sunny day at midday. Instead, choose partly cloudy days—if you can time your shots for those moments when the sun is behind the clouds, those clouds will act as a filter and will soften up the light, allowing you to capture the blue in those parts of the sky that are peeking through the clouds. Alternately, you can simply shoot at either end of the day. During the golden hour, you'll get clear blue skies tinged with some steaks of orange (depending on how close the sun is to the frame)—and if you wait until just before the golden hour (or just after, if you're shooting in the morning) you'll get a much richer blue in the sky than you would in the late morning or early afternoon.

You can also cope with this problem by using a filter. There are two different kinds of filters that could potentially improve your skies—the first one is a graduated neutral density filter, which is like a pair of sunglasses for your lens. The graduated neutral density filter has a dark half and a light half, so you can use it to darken the blues in the sky while keeping the rest of the image unchanged. This is one very effective way to reduce the amount of dynamic range in a very bright scene.

You can also use a polarizing filter, which will deepen the blues in the sky as well as cut back on glare and reflections and make other colors appear brighter and bolder. Polarizing filters are less effective at midday, so this isn't going to be a solution for your midday white skies—instead use them when the sun is either on the left or right side of where you're standing. Polarizing filters are circular, which means that you need to rotate them to get the best effect. To use one, look through your viewfinder as you turn the filter, and when the blue deepens it's time to take the photo.

One thing that almost every beginner does is shoot in matrix or evaluative mode. Most cameras default to one of these modes (they're essentially just different names for the same metering technology), so you may not even be aware that this is what you're doing, or that you have any choice in the way your camera meters the light.

Matrix/evaluative mode works great in almost every shooting condition. That's because camera manufacturers have made matrix/evaluative metering modes really smart. For the most part, they work on a basic premise: that every tone in any given scene is going to average out to roughly middle gray. In other words, if you take the highlights and the shadows and average them together with all the rest of the tones in an image you're going to get an average that's somewhere in the middle, like pavement or a Weimaraner. Most of the time that's going to be pretty close to the truth, so the system works very well. And manufacturers are going even further and including databases of information that include the correct metering for thousands of scenes that you might be likely to encounter. And the technology gets smarter and smarter all the time, too.

But it's still not perfect. For example, what do you suppose would happen if you sent your daughter out to play in the snow wearing a white parka, white boots and white snow pants? You'd have a classic white on white scene, and when you're using matrix or evaluative metering your camera is going to get it all wrong. That's because even though you and I both know that there are mostly whites in that scene, your camera thinks that there must also be blacks and grays, and it's going to give you settings that reflect those assumptions. The result will be an underexposed shot.

Many modern cameras have a way to cope with snowy scenes in that very long list of shooting modes—in “Snow” or “Beach” mode, your camera will add exposure compensation so that you get true white snow instead of a dull gray. But even without scene modes, you can easily learn to recognize situations where your meter might have trouble—the flip side to snowy scenes, of course, is very dark scenes—such as what you might get if you were to shoot a close up of the face of a black animal. In both these situations you can correct the problem with positive or negative exposure compensation (marked with a “+/-” symbol). Use positive compensation (+1/3, +1/2, +1 etc.) for underexposure and negative compensation (-1/3, -1/2, -1 etc.) for overexposure.

It takes some experience to recognize scenes that might fool your meter—another good example is stage performances, which tend to have very broad dynamic range between the dim lights in the seating area and the spotlights on the stage. If you find yourself in a similar situation, try switching to spot metering, which is the mode that meters only what’s in the center of the frame rather than taking an average of everything in the scene. Place the spot over your subject’s face and use those settings to make the exposure (note that you may need to add or subtract exposure compensation depending on how dark or light your subject’s skin tone is). You’ll get a well-exposed face, but the rest of the scene may fall off into complete darkness. That’s OK, because when you’re shooting stage performances you don’t need any details beyond what’s been lit by the spotlight.

Use spot metering in any situation where it looks like your camera might not get the exposure right—just pick an object that looks like a middle gray (green grass usually meters about right), place the spot over that object and then use those settings to make the exposure.

You should also get into the habit of checking your histogram—that's the little graph that pops up after you shoot a photo (and sometimes before, depending on your camera). Don't worry, reading a histogram is a lot easier than it seems—you really just need to make sure that the graph isn't skewed to the left or the right. If it's skewed to the left that means your photo is underexposed, and you need to add exposure compensation until the histogram is roughly in the middle. If it's skewed to the right the opposite is true—add negative exposure compensation to correct the problem.

Conclusion

Taking pictures is as much about trial and error as it is about what you read or hear from other photographers. Photographers by nature are very visual people, otherwise we wouldn't be so drawn to photography, which means we are also very visual learners. The great thing about making mistakes is that they're excellent learning tools. So don't be afraid to take a few bad photos—the important thing is that you try to understand what went wrong so you can avoid similar problems in the future. If you can think your mistakes through without getting discouraged by them, you will very quickly leave the realm beginner and enter the realm of the intermediate or advanced photographer.

Exhibit Schedule for 2016-2017

October, 2016 - Currently exhibiting at the Schaumburg Library thru 10.30.16.

November, 2016 - Mt. Prospect Public Library - will confirm set up and take down dates later in October.The space will allow 8 x 10s matted onto 11 x 14.

December, 2016 - Not exhibiting this month.

January - February, 2017 - Arlington Heights Village Hall.

March, 2017 - Buffalo Grove Fitness Center.

April, 2017 - Nothing yet.

May, 2017 - Prospect Heights Library

June - August, 2017 - Not exhibiting these three months.

September, 2017 - Palatine Public Library.

A Look at Canon's Back Room at the Rio Olympics


Canon

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OCTOBER 5 COMPETITION RESULTS

Small Monochrome
Old Meets New – Lance Lagoni, Small Monochrome Print of the Month, AW
Train Station Antwerp, Belgium - Nancy Hassman, Small Monochrome AW
Schwabacher Shore – Carol Arnolde, Small Monochrome AW
1932 Rolls Royce – Jeff Berman, Small Monochrome AW
View of Washington Bridge – Nancy Hassman, Small Monochrome HM
What Ever Happened to Bowling – Lance Lagoni, Small Monochrome HM
Out of Order – Carol Arnolde, Small Monochrome HM
Cleo – Jeff Berman, Small Monochrome HM
Vintage Barn – Tom Craig, Small Monochrome HM

Large Monochrome
Terror – Lance Lagoni, Large Monochrome Print of the Month, AW
Successful Hunt – Lance Lagoni, Large Monochrome AW
Walkani Falls – Patrick Grady, Large Monochrome HM
Still Standing – Randy Vlcek, Large Monochrome HM

Small Color
Pink Ginger – Kathy Grady, Small Color Print of the Month, AW
Motown Chester Gregory – Lance Lagoni, Small Color AW
Nature's Beauty Up Close – Judy King, Small Color AW
Out of the Blue – Tom Craig, Small Color AW
Colorado Bend – John Chwalek, Small Color HM
Virgin River-Zion – Nancy Hassman, Small Color HM
Femme Fatal – Randy Vlcek, Small Color HM
Northern Parula – Rich Hassman, Small Color HM

Large Color
Above the Clouds – Tom Craig, Large Color Print of the Month, AW
The Tower – Lance Lagoni, Large Color AW
Hawaiian Sarengetti – Patrick Grady, Large Color AW
Purple Passion – Judy King, Large Color HM
Flying High – Nancy St. Clair, Large Color HM
Light on Walkani Falls – Kathy Grady, Large Color HM
Big Wheel Keep on Turning – Lance Lagoni, Large Color HM

DPI
Anemone Crabs - Bob Reynolds - DPI Color BOS
Ballerina on tiptoes - Bob Reynolds - DPI Color AW
Creepy - Ken Olsen - DPI Color AW
Duluth Harbor Bridge - Larry Arends - DPI Color HM
Contemplation - Joanne Barsanti - DPI Color HM
Struttin His Stuff - Joanne Barsanti - DPI Color HM

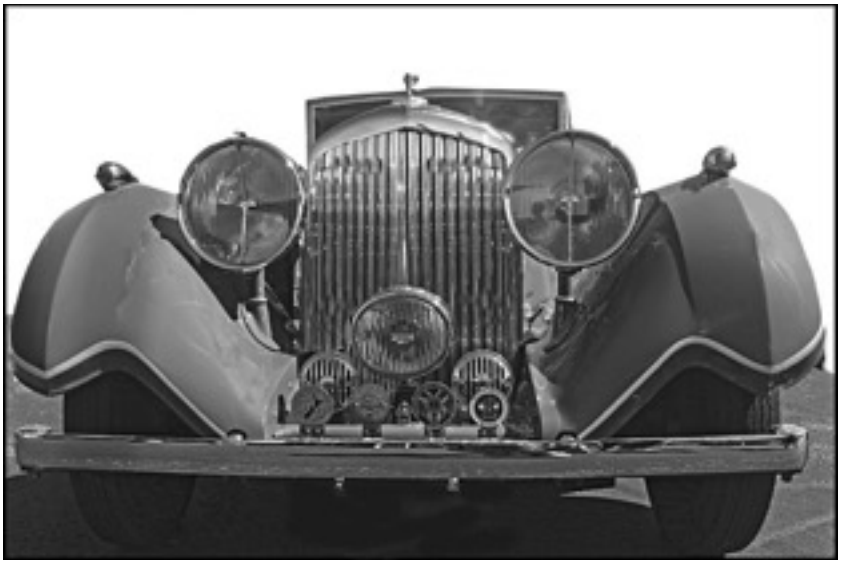
Mono
Mantis - John Chwalek - DPI Mono - BOS
Water lilly - Bob Reynolds - DPI Mono - AW
Old Train Wheel - Barrie Burr - DPI Mono - HM
Tracks - Rich Hassman - DPI Mono - HM

Old Meets New - Lance Lagoni - AW - POM

Small Monochrome

Train Station Antwerp, Belgium - Nancy Hassman - AW

Small Monochrome



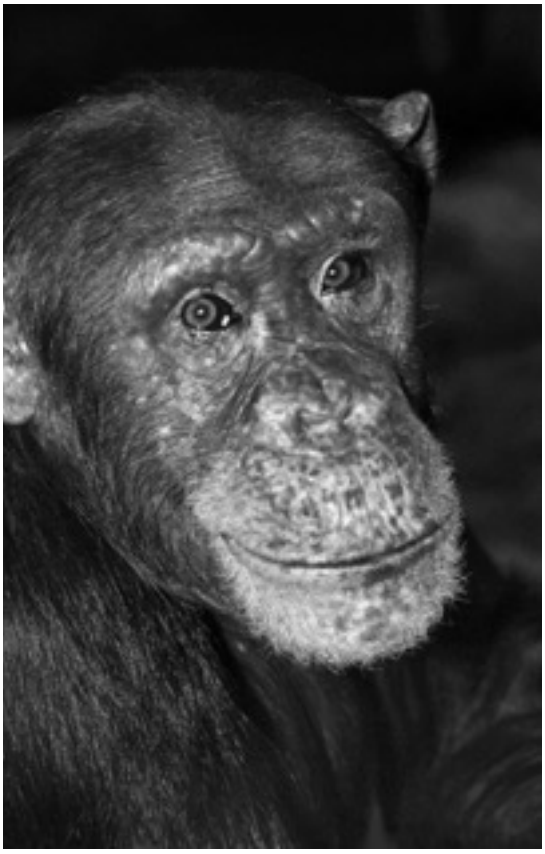
1932 Rolls Royce - Jeff Berman - AW

Small Monochrome

View of Washington Bridge - Nancy Hassman HM

Small Monochrome

Whatever Happened to Bowling - Lance Lagoni HM
Small Monochrome



Cleo - Jeff Berman - HM
Small Monochrome

Out of Order - Carol Arnolde - HM
Small Monochrome

Vintage Barn - Tom Craig -HM
Small Monochrome

Terror - Lance Lagoni - AW
Large Monochrome

Successful Hunt - Lance Lagoni - AW
Large Monochrome

Pink Ginger - Kathy Grady - AW
Small Color

Motown Chester Gregory - Lance Lagoni - AW
Small Color

Nature's Beauty Up Close - Judy King

AW - Small Color

Colorado Bend - John Chwalek - HM
Small Color

Out of the Blue - Tom Craig - AW
Small Color

Virgin River Zion - Nancy Hassman - HM
Small Color

Northern Parula - Rich Hassman - HMS
Small Color

The Tower - Lance Lagoni - AW
Large Color

Hawaiian Serengeti -Patrick Grady - AW
Large Color

Above the Clouds - Tom Craig - AW - POM
Large Color

Purple Passion - Judy King - HM
Large Color

Big Wheel Keep on Turning - Lance Lagoni - HM
Large Color

Anemone Crabs - Bob Reynolds - BOS
DPI Color

Creepy - Ken Olsen - AW
DPI Color

Contemplation - Joanne Barsanti - HM
DPI Color

Ballerina on Tiptoes - Bob Reynolds - AW
DPI Color

Duluth Harbor Bridge - Larry Arends - HM
DPI Color

Mantis - John Chwalek - BOS
DPI Monochrome

Stratton His Stuff - Joanne Barsanti - HM
DPI Color

Water Lilly - Bob Reynolds - AW
DPI Monochrome

Old Train Wheel - Barrie Burr - HM
DPI Mobochrome

Tracks - Rich Hassman - HM
DPI Monochrome

One last thing…

“Maybe I'll take some photos of the kids"