

Stockton Camera Club

The Shutter Tripper February 2019 2018 Digital Images of the Year



Red Shoulder Hawk
Class A Image of the Year - Sheldon McCormick

Grey Wolf in Snow Flakes
Class AA Image of the Year - Heide Stover



Winter Wolf
Class AAA Image of the Year - Dean Taylor



2019 Print Images of the Year



Flo's V-8 Café at Night
Class A Print of the Year - Wayne Carlson

Stay Close to Mother
Class AA Print of the Month - Christine Blue



Time Gone By
Class AAA Print of the Month - Sharon McLemore



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President's Message

February 2019

By Heide Stover

We had a wonderful turnout for our end of the year banquet. It was a wonderful event thanks to the help of Wayne and Roxanne. Their house was big enough to entertain 20 of us. Roxanne cooked a wonderful meal, actually meals, since she made 3 main dishes. The food was wonderful. We were made to feel welcome and comfortable. The images were shown on their television set and looked great! I think this was the best banquet ever!!!

Congratulations to all the winners. Susan Bovey was our judge and I think she did a wonderful job.

Now the new year begins. Start working on your images for the year. I'll see you all at our February meeting.

Happy Shooting

A Big Thank You to Our Sponsors!



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2018 Competition Policy

A. GENERAL RULES

1. Only paid-up members may enter club competition.
2. Regular print and digital image competition period: Once each month except January. A competition year is February through December. Current regular meetings are February, March, May, July, September, October and December. The number of meetings may change from time to time at the discretion of the Board of Directors and approval of the general membership as facilities permit. The Annual Awards Dinner will be held in January.
3. A total of four (4) images (all prints, all digital or a combination of both) may be entered each competition month. A total of three (3) images may be entered in the Open Division and a total of one (1) in the Special Subject Division. The number of entries may change from time to time at the discretion of the Board of Directors and the approval of the general membership.
4. Each image will be scored from 6 to 10 points. All prints or digital images receiving 9 or 10 points will be classed as an honor image. The title of each print or digital image entered will be read before being evaluated. The name of the maker will be read for 9-point honor winners. Maker's names will be announced for the 10 point images after the Print & Digital Image-of-the-Month winners are chosen.
5. A print or digital image that does not receive an honor score, may be re-entered one more time in the same division.
6. A print or digital image may be entered in all divisions for which it qualifies; i.e., an honor image in Open may also be entered in the Special Subject Division at another competition. A print or digital image that receives an honor score may not be re-entered in the same division.
7. Any print or digital image that appears to be ineligible for competition or not qualified for a specific division could expect to be challenged. The Competition Vice-President shall decide whether or not the image is acceptable.
8. The exhibitor must have exposed each negative, slide or digital image entered. All images submitted for judging must be the work of the photographer/maker including the taking of the images and any digital enhancements and/or manipulation of the image. This does not apply to the processing of film or printing by a commercial processor.
9. The same image should not be entered both as a print and a projected digital image in the same competition.
10. In the event of absence or barring unforeseen circumstances, a member may submit make-up prints or digital images for one competition night per competition year; and whenever possible must submit all make-up prints or digital images at the meeting immediately following the month a member failed or was unable to submit the prints or digital images. Make-ups in the Special Subject Division must be the same subject as the month missed. Also, in case of absence a member may assign the responsibility of submitting his or her prints and/or digital images for competition to another member.
11. A club member who serves as judge cannot enter his or her own prints or digital images in the same competition. The judge's make-up prints or digital images can then be entered in another competition during that competition year. This is in addition to the once-a-year make-up provision already

allowed.

12. Prints or digital images may be projected/viewed briefly before the judging of each division if the judge indicates he/she would like a preview.

B. PRINT ENTRY RULES

1. Each print entered must have a completed label attached to the back of the print including; name of maker, title, date entered and Division (Open or Special Subject). The writing or printing on the form must be legible. Labels must be attached on the back of the print in the upper left-hand corner for correct viewing of the print.
2. All prints must be matted or mounted with a total size (including mat board) of no larger than 18" X 24" and no smaller than 8" X 10". Exception: One side of a Panorama Print may be no larger than 36". Prints that are smaller than 5" X 7" will not be accepted. The maker's name must not appear on the viewing surface of the image. Framed prints shall not be entered.
3. Prints accompanied by entry forms should be submitted no later than 15 minutes prior to the start of the regular monthly meeting.
4. Prints receiving a score of 10 points, in each class, will be regrouped and judged for selection for the Print-of-the-Month honors. Print-of-the-Month honors will be given in Class A, AA & AAA.

C. DIGITAL IMAGE ENTRY RULES

1. Digital images must be submitted in a format and by the deadline specified by the Competition Vice-President. Digital images may be submitted by email, mailed (CD) or delivered (CD) to the Competition Vice-President. Definition of Digital Image: An image taken with a digital camera, a negative, slide or print scanned into the computer and processed digitally.
2. Images must be in a format compatible with the projector. The key thing to keep in mind when formatting photos for submission is that the projector we use in the competition has a (maximum) resolution of 1400 x 1050 pixels. This means that any photo that exceeds this size in either dimension, could end-up being cropped by the projector. In other words: the image width cannot be more than 1400 pixels and the image height cannot be more than 1050 pixels. If your image is horizontal, only change the width to 1400, if your image is vertical, only change the height to 1050. Do not change both. Down-sizing the image from the "native" resolution coming out of your camera also significantly reduces the file size. This helps when emailing the files and takes-up less space on our hard-drives.
3. The maker's name, title of image, date entered and division (Open or Special Subject) must be included as the title of the image. When you have finished re-sizing your image save your image with a new title. For example do a Save as: Smith Sunrise Splendor 05-15 O.jpeg. (O-Open or SS-Special Subject). Specify whether you're Beginner, Advanced or Very Advanced.
4. Digital Images receiving a score of 10 points, in each class, will be regrouped and judged for selection for the Digital Image-of-the-Month honors. Digital Image-of-the-Month honors will be given in Class A, AA & AAA.

2019 Calendar of Events

Every 3rd Thursday (Except April, June & Aug) 6:30 PM	West Lane Bowling Alley Stockton	Membership Meeting Contact Heide Stover h1stover@aol.com
Thursday February 21	West Lane Bowling Alley Stockton	February General Meeting Special Subject - Guilty Pleasure
Thursday March 21	West Lane Bowling Alley Stockton	March General Meeting Special Subject - Focus On One Color
April	TBA	April Workshop/Photo Opportunity
Thursday May 16	West Lane Bowling Alley Stockton	May General Meeting Special Subject - Backlit
Thursday June 20	West Lane Bowling Alley Stockton	June General Meeting Prints only with no special subject
Thursday July 18	West Lane Bowling Alley Stockton	July General Meeting Special Subject - Gates/Fences

Stockton Camera Club

December 2018 Year End Scoresheet

Congratulations to all the winners!!!

Susan Bovey of Woodland Camera Club was the judge for our Annual Competition

Print of the Year Class A – Flo’s V-8 Café at Night by Wayne Carlson

Print of the Year Class AA – Stay Close to Mother by Christine Blue

Print of the Year Class AAA – Time Gone By by Sharon McLemore

Digital Image of the Year Class A – Red Shoulder Hawk by Sheldon McCormick

Digital Image of the Year Class AA - Grey Wolf in Snow Flakes by Heide Stover

Digital Image of the Year Class AAA – Winter Wolf by Dean Taylor

Please check out the website, <http://www.stockton-cameraclub.com/home.html>

Class A Standings	TOTAL	OPEN	SS	FEB	MAR	MAY	JUN	JULY	SEPT	OCT	NOV	DEC
Wayne Carlson	340	273	67	37	39	39	35	39	38	37	38	38
Sheldon McCormick	324	260	64	36	35	38	38	37	34	35	36	35
Jim Cahill	90	80	10	25	0	38	27	0	0	0	0	0
Ron Wetherell	75	75	0	27	0	19	0	29	0	0	0	0
Lanny Brown	56	36	20	0	10	18	18	10	0	0	0	0
Brenda DeRoos	32	23	9	0	0	0	0	0	0	32	0	0
Monica Hoeft	26	26	0	26	0	0	0	0	0	0	0	0
Class AA Standing	TOTAL	OPEN	SS	FEB	MAR	MAY	JUN	JULY	SEPT	OCT	NOV	DEC
Em McLaren	342	275	67	39	38	38	38	39	38	38	37	37
Heide Stover	340	275	65	39	39	37	37	37	37	37	39	38
Elizabeth Parrish	323	261	62	36	34	38	37	38	35	34	37	34
Paul Chapman	214	167	47	34	37	36	34	38	35	0	0	0
Christine Blue	306	239	67	37	39	38	0	39	37	39	39	38
Richard Bullard	111	93	18	0	37	36	38	0	0	0	0	0
Stan Sogsti	37	28	9	37	0	0	0	0	0	0	0	0
Ed Richter	0	0	0	0	0	0	0	0	0	0	0	0
Class AAA Standing	TOTAL	OPEN	SS	FEB	MAR	MAY	JUN	JULY	SEPT	OCT	Nov	DEC
Dean Taylor	346	279	67	39	39	39	39	38	38	36	39	39
Joanne Sogsti	345	276	69	39	37	39	39	40	37	37	39	38
Sharon McLemore	339	273	66	38	39	39	37	38	37	36	37	38
Trey Steinhart	188	143	45	37	37	37	0	40	0	0	0	37
Doug Ridgway	231	192	39	39	39	0	0	39	39	0	37	38
Susanne Nichols	60	30	30	0	20	20	0	0	20	0	0	0

High Point Winners:	Name	Number of Points
Class A - Open	Wayne Carlson	273
Class A - Special Subject	Wayne Carlson	67
Class A - Total	Wayne Carlson	340
Class AA - Open	Em McLaren & Heide Stover	275
Class AA - Special Subject	Em McLaren	67
Class AA - Total	Em McLaren	342
Class AAA - Open	Dean Taylor	279
Class AAA - Special Subject	Joanne Sogsti	69
Class AAA - Total	Dean Taylor	346
Highest number of accumulated Points	Dean Taylor	346

2018 Annual Digital Image Winners

Open - Class A

Wood Duck	First Place	Sheldon McCormick
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Special Subject - Class A

Tulip Farm	First Place	Sheldon McCormick
Window at Garry's Lounge	Second Place	Sheldon McCormick

Black & White - Class A

Osprey in Flight	First Place	Sheldon McCormick
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Digital Image of the Year Class A

Red Shoulder Hawk by Sheldon McCormick

Open - Class AA

King of the Savannah	First Place	Christine Blue
Taking to the Skies	Second Place	Christine Blue
Passing Storm	Third Place	Em McLaren

Special Subject - Class AA

Sunny Day Bandon Beach Oregon	First Place	Em McLean
Not Your Mama's Golden Arches	Second Place	Christine Blue
Got Milk	Third Place	Em McLaren

Black & White - Class AA

50 Shades of Gray	First Place	Christine Blue
Geese in Flight	Second Place	Heide Stover
Whimsical Wishes or Garden Weed	Third Place	Christine Blue

Digital Image of the Year Class AA

Grey Wolf in Snow Flakes by Heide Stover

Open - Class AAA

Cinque Terra Italy	First Place	Sharon McLemore
Early Winter Teton Barn	Second Place	Dean Taylor
View at Mokolunne Thru a Crystal Ball	Third Place	Joanne Sogsti

Special Subject - Class AAA

Gurdwara Arches at Sunset	First Place	Dean Taylor
Memphis Neon	Second Place	Sharon McLemore
Going Home	Third Place	Joanne Sogsti

Black & White - Class AAA

Night Hunter	First Place	Joanne Sogsti
Drying Mud Johnson Wash	Second Place	Dean Taylor
The Thinker	Third Place	Dean Taylor

Digital Image of the Year Class AAA

Winter Wolf by Dean Taylor

2018 Annual Print Image Winners

Open - Class A

Inside Out Mum #5	First Place	Wayne Carlson
Ospreys	Second Place	Sheldon McCormick
Lavender Field	Third Place	Sheldon McCormick

Black & White - Class A

The Fog Rolls In	First Place	Wayne Carlson
Door to 1938	Second Place	Wayne Carlson

Print Image of the Year Class A

Flo's V8 Café at Night by Wayne Carlson

Open - Class AA

Monterey Shore	First Place	Elizabeth Parrish
Dahlia	Second Place	Christine Blue
Hummer and Mantis	Third Place	Heide Stover

Black & White - Class AA

Bare Trees in Flooded Field	First Place	Heide Stover
Round the Barrel	Second Place	Heide Stover

Print Image of the Year Class AA

Stay Close to Mother by Christine Blue

Open - Class AAA

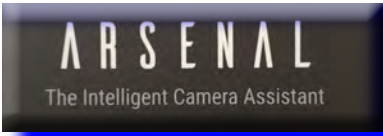
Fall Color Nevada City	First Place	Joanne Sogsti
Snaky Sinker Creek	Second Place	Trey Steinhart
Wasatch Autumn	Third Place	Dean Taylor

Black & White - Class AAA

Death Valley Texture	First Place	Dean Taylor
Swans at Turner Cut	Second Place	Trey Steinhart
Durst Mansion in Crystal Ball	Third Place	Joanne Sogsti

Print Image of the Year Class AAA

Time Gone By - by Sharon McLemore



Why are Holy Grail Timelapses so Difficult?

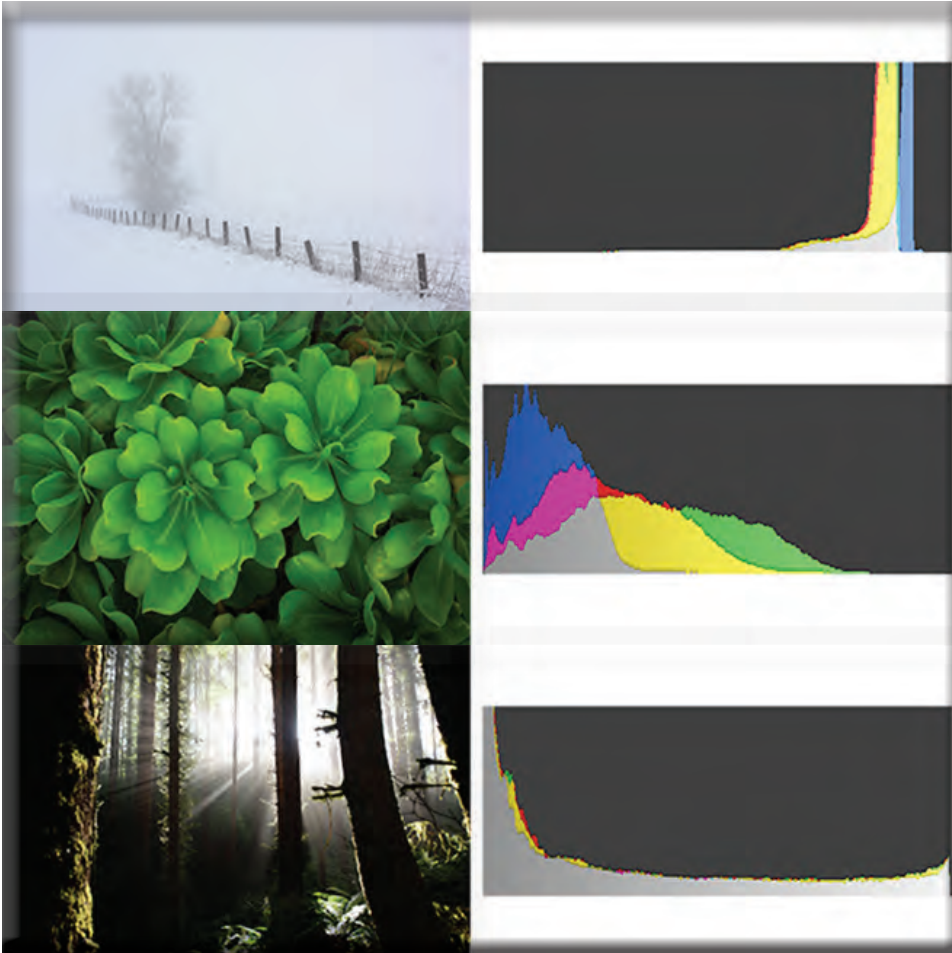
By [Ryan Stout](#)

04 January 2019

Hey everyone, Ryan here with my first true blog post in a while.

While I've focused on the development and launch of Arsenal for most of the last year or more, I want to introduce some additional content through the blog over time. I thought I'd start by writing about "holy grail" timelapses in anticipation of releasing that feature for Arsenal in the near future. In case you missed it, we provided some details on the timing of that release in another recent blog post.

A "holy grail" timelapse is one where your timelapse runs from day to night (or vice versa). The first time I heard the term I thought the name was a bit over the top. After a few years of trying though, I had only managed to get a few successful holy grail timelapses and they weren't easy to get. Before I can talk about how Arsenal solves this problem, let me explain why it's such a challenging one (unless you've tried to take one, in which case you already know).



Keeping the exposure

Exposure is a complex thing. When doing holy grail, we need a way to keep the exposure correct as the light changes. This might seem simple, but exposure is more complex than you might expect. It's not simply holding settings so the photo has the same histogram. Different scenes should produce different histograms, based on the content in the scene.

All of the above are what I would consider good exposure. The histogram needs to change based on a lot of factors, the details of which I could probably write a whole additional blog post about (and maybe someday I will!).

How to adjust exposure

Ideally we would like each shot in our timelapse to be correctly exposed and smoothly ramped between any setting changes. This leaves us with a few options:

1) Manually changing the settings

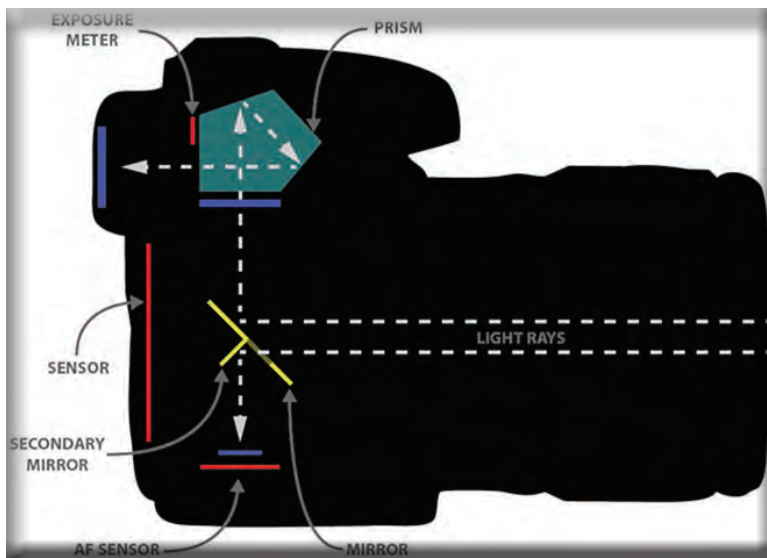
A good day-to-night timelapse is usually at least a few hours of shooting. The technique I see people having the most success with involves "babysitting" the camera and updating the settings manually every few minutes based on the last few shots. It's a ton of work, but it can produce decent results (especially when smoothing is added in post). The challenge is ramping smoothly and judging the exposure correctly on the back of the camera screen. As it gets dark, your eyes have a harder time judging things and you need to rely more on the histogram. The other challenge is any setting adjustments need to happen during the interval, which can be tricky. All of the cameras I've ever used stop showing the review photos a few seconds before the next shot triggers, so this can leave you with only a few seconds to make a judgement and adjust settings. It also results in quite a bit of bumping the camera and opens up a host of issues if you miss shots or adjust settings suboptimally.

2) Shoot in aperture or shutter priority

The main issue is metering and lack of smooth ramping. Here's a quick overview of how metering works:

For DSLRs with the mirror up there's some sensors that pick up some of the light in a small grid of sensors to detect brightness (the red "exposure meter" line in the diagram above). The Nikon D810 has 91,000 of these "metering pixels" for example.

For mirrorless cameras or in live view on DSLRs, they use the read-out from the sensor. This usually means a short sensor read-



out (from what I could find, this is usually at 1/30th of a second on most cameras).

The problem is both of these metering techniques start to fail when things get dark. Cameras can only meter up to a point and once they aren't metering anymore, your timelapse isn't going to work. There's a lot more I could say here, but I'll keep it short (maybe another blog post).

Lastly, aperture/shutter priority still needs ISO adjustments to get you to night. You can use auto-ISO, but I have yet to find a camera that lets me control how auto-ISO and aperture priority interact in a way I think makes sense.

3) Luminosity Pegging

There's a few third party tools out there for holy grail. Their approach involves taking a test photo and grabbing the average luminosity from that photo. This approach

has a lot of issues, and I think it's gotten popular because it's relatively easy to build a tool to peg luminosity.

Here's the issues with luminosity pegging as I see it:

A) Night scenes should be darker

As mentioned above, correct exposure is pretty complicated. One thing our brain expects is photos to be darker for the same scene when there's less light hitting the scene (aka at night). The difference isn't huge in the final photo, but without it there are things that don't look like they are at night. This can be handled by lowering the luminosity as it gets darker, but this usually doesn't mirror actual changes in light. Often during good sunsets, it will get brighter before it gets darker. Other times it can get dark fast.

B) Dynamic Range

The range between the darkest elements in a photo and the brightest can change quite a bit during sunset/sunrises. During midday and midnight, it's often possible to keep the darkest and brightest components within the dynamic range of the camera. As the sun goes down or comes up though, there can be times when you have to choose between losing details in the shadow and losing details in the highlights. This decision depends on specifically what the scene is, and varies based on subject.

C) Camera Response Function

Variations in the amount of light hitting the sensor does not linearly affect the brightness levels recorded in the final photo. As light increases, cameras "roll off" the highlights to make the area around blow highlights more pleasing. The result is large adjustments in luminosity can have minimal impact on some shots.

D) Changes in Scene

When something changes in the scene you're shooting (clouds move out, moon goes away, etc), that should impact the exposure calculation. Pegging will hold the luminosity constant. I find the effect here is usually a photo that doesn't reflect the "mood" of the real scene.

All of these approaches can work, but I've tried all of them and each tends to fail in one way or the other. I've had the most success with manually changing settings, but it takes more patience than I usually have and any errors or misses can be pretty impactful to something you've invested a lot of time in.

Using the current tools and techniques, it's pretty easy to end up with a timelapse that either requires a lot of work in post or is unusable. These tradeoffs are what set me in the direction of developing a holy grail timelapse solution. I wanted the control and ability to handle all different types of timelapses while also being able to reliably get higher quality results.

My apologies if this was all a bit too technical. I wanted to share my thoughts so users can really experience the benefits of the holy grail mode when launched, and to do so I had to lay some foundation work for how holy grails are done today. In my next blog post I'll write about how Arsenal solves this problem. It will include some details of the distinct features within holy grail mode at launch, as well as some things we have planned for the future. In the meantime, I hope everyone is enjoying their [Arsenal!](#)

[-Ryan
Ryan Stout](#)

Read more posts by this author.

Photographing Birds In Flight

All of my best tips for what can be a very challenging pursuit

Text & Photography By Melissa Groo

November 26, 2018



Common tern with fish landing on a beach in Massachusetts.

Photographing birds in flight is an art form. Truly. For a subset of wildlife photographers, it's also an addiction. It can present formidable challenges, but the payoffs can be hugely satisfying. It's easy to get hooked on those payoffs. There's nothing like bringing all your senses and skills to bear on a small creature moving so fast your eye can barely keep up with it, let alone your camera, and then discovering that you have absolutely nailed the shot, and captured a pose that shows the glorious colors and patterns of a bird's plumage—and, somehow, the spirit and essence of flight.

I can't pretend to know everything about photographing birds in flight, but I will say that this article is my attempt to share with you every single thing I know that has helped me to achieve successful photos of flying birds. I really want to help you master this art form. As photographers in this digital age, we certainly have the tools to do so, and those tools are improving all the time. But we need to

know which tools to use and when and what specialized skills are necessary for this very specific kind of wildlife photography.

Gear For Photographing Birds In Flight

First of all, let's address gear. Speaking broadly, you need a camera that can capture at a rate of at least seven frames per second and a hand-holdable lens from 300mm to 600mm. I say "hand-holdable" simply because I believe that's generally the best way to photograph flying birds successfully; however, there certainly are photographers who prefer to use tripods and are successful.

In terms of lenses, prime telephotos have historically offered better optical quality than zooms, but rapid advances in digital technology are changing that hard-and-fast rule, and some zoom lenses are capable of sharp, high-quality images. More than anything, you want a "fast lens," one with a maximum aperture of $f/5.6$ or larger, preferably $f/4$ or $f/2.8$. These are called fast lenses because they let more light in, and thus they can achieve the same exposure with a faster shutter speed.

Teleconverters are essential tools for extending your reach, though they will cut down on your light and speed. A 1.4x teleconverter reduces the maximum aperture of the lens by one stop, so my 600mm $f/4$ becomes an $f/5.6$ lens. I usually start out with my teleconverter attached if I have good light with which to work. If I'm having trouble tracking a bird, I will take the teleconverter off, as I always have an easier time grabbing focus with just my 600mm $f/4$. This is true with both the Canon and Nikon pro bodies and lenses I've used.

What if you don't want a big lens or can't afford one? There are some spots where birds are practically tame, flying considerably closer to people than usual, like in much of Florida; here you can get away with a 70-200mm lens and come up with great shots of terns flying around the beach or pelicans diving into the ocean at close range. There are also destinations where birds congregate in large numbers at certain times of the year, offering opportunities for wide-angle lens photography, like snow geese and sandhill cranes in Bosque del Apache, New Mexico, in fall and winter. But for the truly serious photographer of birds in flight, long lenses are critical.

Steady Shooting

If you handhold, try to think of your body as a tripod. Take a firm stance with your legs placed comfortably apart, tuck both elbows into your sides for stability, and swivel at the waist as you pan with the bird. Remove the tripod collar if you want to reduce weight, and consider removing your lens hood if there is a brisk wind to lessen the drag. If you use a tripod or monopod, gimbal heads provide the best panning motion for birds in flight.

Weather & Light

Being in tune with light and weather conditions is absolutely critical for successful photography of birds in flight. That's one of the things that I love about this kind of photography—it requires me to be in close touch with the elements, with the quality and angle of light and the direction and strength of the wind. At this point in my photography life, if the wind and sun are not at my back, I tend to avoid shooting birds in flight. Of course, I make exceptions, as I love to experiment with backlighting, but this is a general rule for me. I've learned from much trial and error that if the sun is rising and I stand with it behind me, but the wind is blowing from the west, all I will get are well-lit bird butts. Why? Because, as I am sure many readers know, birds fly into the



A northern harrier hunts low over a field in Mission Valley, Montana.

wind. They even tend to sit facing into the wind when they are resting, always ready to flee in case of danger. So, if the sun is coming from behind you but the wind is coming from the opposite direction, the birds will be flying away from you. You always want things to align—wind and sun coming from the same direction—as much as possible. That means a westerly wind in the evening, an easterly wind in the morning.

I keep a lookout for periods of strong wind, particularly in winter, as they provide a great opportunity to photograph birds in flight. The wind will slow the birds down considerably as they fly against it, making them easier targets for your AF system. It's also a good time to find raptors hover hunting, such as rough-legged hawks and kestrels.

A note about light: Try to photograph flying birds only in good light. Low-angled sunlight is best, but bright overcast conditions can work very well, too. What you

want to avoid is photographing birds when the sun is bright and high. You will get lots of shadows under the bird that will cause unappealing contrast. There are many apps available to help you predict light angle and weather conditions. Two of my favorites are TPE (The Photographer's Ephemeris) and Dark Sky.

Head & Body Angle

The angles of the bird's body and head in relation to your camera are crucial considerations. A head that is parallel to your lens is fine, but a head slightly turned to you is better. A head slightly turned away usually fails to engage the viewer and is simply not worth pressing the shutter for.

In terms of the body, is it just past you in its flight path? This is less powerful. Have the bird either flying toward the point directly ahead of your lens or parallel with it. As for composition, try to leave more room in front of the bird when shooting by choosing AF points to the side. If that's too tough (as it is for me), you can do this in post-processing, placing more room in front of the bird than behind.

Predicting Flight

I am always preaching the importance of learning about the behavior of your wild subjects. This case is no different. Recognizing the signs of impending flight will help you to prepare and increase your chance of getting the shot and getting it right. Telltale signs include when the bird lightens its load (defecates), suddenly looks more alert, lifts its head high and looks around, or intently points into the wind. Think about your positioning vis-à-vis the bird, and if you can without disturbing it, place yourself in its projected flight path, meaning upwind of it.

Background Matters

You hear a lot about the importance of background for bird portraits. It's just as important for birds in flight. Sometimes a bird flying against a blue background can be appealing, but often it makes for a less-than-interesting shot, and the same bird against a mountain range or sea of grass can be stunning. If you have a choice, wait until the bird is flying low enough so that there is some interesting color or texture behind it. This may mean you need to change your own position, getting higher if possible. Birds against a white, overcast sky can be deadly, too, unless you are purposely going for an artistic, high-key look.

Prolific Practice

This is definitely a case where practice is absolutely essential if you want to improve your skills. I always suggest practicing at a local park where birds are used to people. Gulls are a terrific target, as they are usually around, and they provide a great opportunity to perfect your exposure skills on white birds. Go to your town dump or a hydroelectric dam to find them. Your development of skillful hand-eye coordination is critical.

Having trouble finding birds where you live? Go to a hometown soccer or basketball game and practice on the fast-moving athletes to experiment with different settings.

Camera Settings For Photographing Birds In Flight

Shutter speed is always the first thing I'm thinking about. I don't like to photograph flying birds under 1/1600 sec. and will go as high as 1/4000, or even 1/5000 for hummingbirds, swallows and other speedsters if I have the available light. Get comfortable with high ISOs, and be familiar with how far you can push your camera until the noise becomes unacceptable. Use continuous focus (AF-C on a Nikon, AI Servo on a Canon). Shoot wide open, using your largest aperture. Use high speed/continuous burst mode. Find out what the fastest memory card is for your camera and buy it, and use respected, well-known brands. Employ



A roseate spoonbill touches down on a sandbar in Tampa Bay, Florida.

the focus limiter on your lens if you know you're working only within a certain range. Turn Image Stabilization or Vibration Reduction off as it can slow down focus acquisition of the subject. Set your focus tracking sensitivity to the slow setting (once you acquire focus, this keeps the camera from refocusing if the focus point slips off).

What about autofocus settings? These are, of course, central to this discussion. Most important is to get to intimately know your camera's AF system. Get a dummy guide to your camera model or one of the many books written by leading camera experts using plain language. For a long time, I used only center point focus, as I thought that was the best way to ensure I didn't lock on anything but the bird. Many people find they prefer using expanded focus areas. It will differ for each person, and you just have to test out the various options on your camera to discover what works best for you. I recently switched to Nikon from Canon and am finding the AF

system in the D850 (which is the same in the D5 and D500) is the best I've ever used for birds in flight. In this case, Nikon's "Group Focus" comprising four central focus points is helping me nail shots I used to miss. This was a big reason for my switch.

You will mostly want to shoot in Manual mode. Only in this mode does your exposure stay the same no matter how the background changes in tone or color behind your moving bird. When I first started out, I used Aperture Priority (and that is certainly a useful mode to keep in mind when the ambient light is changing), but I soon realized that my exposure changed rapidly as background changed and that I needed to use Manual mode to advance in my skills.

Study The Art

Feast your eyes on images of birds in flight. Browse Google image search, visit photography forums and follow the social media pages of bird photographers you admire. Train your eye. As I have said, this is an art form, and you need to study the art. This is imperative for your learning process. What do you find beautiful and why? What's been done to death? How can you come up with something different?

Ethical Considerations

Many people use multiframe set-ups on hummingbirds to great effect. With most birds, though, flash doesn't work as they are too far away. Use of flash at night on birds that are nocturnal should be avoided. These birds rely on their night vision to hunt and to see where they are going. A flash may temporarily blind them (even if just for a very brief moment) and cause injury.

Never intentionally flush a bird to get a flight shot. It may be tempting to compel birds like owls and other raptors to fly, but it's unkind and unethical. Birds perch for a reason—in general, to rest or to hunt. By forcing them off their perch, you are interfering with their natural processes and causing them to unnecessarily expend valuable energy. Please keep in mind that these are just photos to us, but to wild animals, every moment is about survival.

Rules For Photographing Birds In Flight: A Caveat

I've shared here what I see as some basic rules of flight photography. But as always, rules are meant to be broken, and I would never want anyone to think they would have to follow a particular formula in order to do beautiful work. For instance, photographing birds in flight with a slow shutter speed to purposely create blur can make for spectacular images. So get out there, experiment, develop your unique style, and above all, have fun!



[Melissa Groo](#)

Melissa Groo is a wildlife photographer, writer and conservationist. She believes that photography can be both fine art and a powerful vehicle for storytelling and education, and considers herself a "wildlife biographer" as much as a wildlife photographer. Passionate about ethics in nature photography, Groo is represented by Nat Geo Creative, a contributing editor to Audubon magazine and an Associate Fellow with the International League of Conservation Photographers. She advises the National Audubon Society on ethical photography, and has also counseled National Wildlife magazine and NANPA (North American Nature Photography) on guidelines for ethical wildlife photography. She also serves as a member of NANPA's Ethics Committee. In 2017, Melissa received the Katie O'Brien Lifetime Achievement Award from Audubon Connecticut, for demonstrating exceptional leadership and commitment to the conservation of birds, other wildlife and their habitats. She also received the NANPA 2017 Vision Award, given to a photographer every two years in recognition of early career excellence, vision and inspiration to others in nature photography, conservation and education.