



Dragonfly Photography

by Vic Berardi

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Introduction



Widow Skimmer / Photo by Vic Berardi

Ever see a stellar image of a dragonfly and wonder how the photographer achieved such a shot? It's actually easier than you might think, especially if you follow a few simple guidelines.

Like most wildlife and nature photography, the best photos are usually a result of searching for the best opportunities. However, this generally takes a great deal of time and patience. Dragonfly photography is different in that these wonderful creatures are abundant and readily seen around virtually any body of water and nearby fields or woods. The only weather elements you need for the best conditions are temperatures above 70 degrees and mostly sunny skies. And, although dragonfly activity is highest during midday, they can be present in good numbers from shortly after sunrise to shortly before sunset.

Equipment

Dragonflies can be photographed with everything from a simple point-and-shoot camera to a Digital SLR (DSLR). If you choose a point-and-shoot camera, make sure it has an adequate zoom capable of at least a 35mm equivalent of 300mm and a close focus distance (under 3 feet) or a macro mode. I have seen many outstanding photos taken with point-and-shoot cameras capable of dragonfly photography. A couple of recommended point-and-shoots are:

Panasonic Lumix DMC-FZ35

- ◆ 12.7 megapixel
- ◆ 27-486mm (35mm equivalent)
- ◆ Focuses at 11.8 in, in normal mode
- ◆ Focuses at 0.4 in, in macro mode
- ◆ Records HD video

Nikon Coolpix P100

- ◆ 10.3 megapixel
- ◆ 26-678mm (35mm equivalent)
- ◆ Focuses at 1.5 ft, in normal mode
- ◆ Focuses at 9.4 in, in macro mode
- ◆ Records HD video

Keep in mind, most point-and-shoots have smaller sensors than a DSLR, which on the plus side produces better depth of field than most DSLRs but can be problematic when trying to enlarge an image to a sharp detailed 11x14 or larger print. If you only plan to make smaller prints (8x10 or smaller), then a point-and-shoot may be all you need. For use on blogs and websites, a point-and-shoot will work beautifully.

Another thing to keep in mind is that a DSLR will generally give you more options in auxiliary equipment and camera settings. Because of familiarity, this article will focus on DSLRs but many of the techniques and principles are applicable to most point-and-shoot cameras that have a close focus distance and full manual adjustments. Canon, Nikon and other DSLR cameras have similar lenses and capabilities, but I will focus on Canon equipment.

Here is the basic setup and the equipment I use for dragonfly photography:



- ◆ Canon 50D DSLR and Canon 7D DSLR
- ◆ Canon EF 300mm f4.0L IS USM lens
- ◆ Canon EF 100mm f2.8 USM Macro
- ◆ Canon 1.4x EF Extender II & 2.0x EF Extender II
- ◆ Canon 25mm and 12mm Extension Tubes
- ◆ Canon Right Angle Finder C
- ◆ Canon Remote Switch RS-80N3
- ◆ Canon 580-EX Speedlite Flash Unit
- ◆ Gitzo GT2530 Tripod with Rapid Column
- ◆ Various collapsible diffusers and reflectors for controlling contrast

I use the Canon 100mm f2.8 Macro lens only on certain occasions and find the longer reach of the 300mm lens better suited for skittish dragonflies. With the 1.4x tele-extender I get a better chance of filling the frame of even the smallest dragonflies. The Canon 300mm f4 lens also has a remarkably close focusing distance of 4.9 feet. With a 25mm Extension Tube attached I can get several inches closer with little loss of light for exposure. But keep in mind, when using extension tubes you also lose infinity focusing so any other subjects at a distance will not be within the range of the lens/extension tube combination.

Sharpness

This is singularly the most vital element of insect photography. In general, if any part of the dragonfly is out of focus it is distracting to the viewer and can be judged as an inferior photo.

Keep in mind the importance of Depth Of Field (DOF). Try to keep the majority of the dragonfly (head to tip of abdomen) as parallel as possible to your camera's sensor plane. Try to select an aperture of at least $f/8$. The Twin-spotted Spiketail photo below demonstrates how such an image looks.



Twin-spotted Spiketail / Photo by Vic Berardi

There are occasions when getting the entire dragonfly perfectly parallel to your camera is unachievable. In those circumstances make sure the head/eyes are as sharp as possible. If these parts of the dragonfly are blurry the photo will be virtually worthless.

Because dragonflies move around a lot by flicking their wings, twisting their heads all around and moving their legs, you will need to use a shutter speed of at least $1/125$ with $1/200$ or higher preferable. In bright sunlight, it is feasible with an ISO 200 to have a shutter speed of $1/200$ at $f/11$ for medium toned dragonflies and $1/200$ at $f/8$ for darker dragonflies.

You will also want to use Manual Focus on your lens. Using Automatic Focus can be difficult to use because of the reduced depth of field you will be working in. Your lens will have a hard time locking in on the dragonfly. Except for true macro lenses, using the distance scale on the lens will be useless. Remember, you will be focusing within fractions of an inch to achieve maximum sharpness.

I strongly advise the use of a tripod if at all possible. Good photos can be achieved by hand-holding a camera/lens equipped with image stabilization, but use of a tripod ensures a much higher percentage of sharp photos. Yes, you will miss a few shots but you will be rewarded by the ones you do not miss. If you do use a lens with image stabilization, make sure you turn it off unless it is tripod sensitive (check your lens manual).

Choose a tripod capable of getting very low to the ground and able to reach a height of at least 50 inches. My Gitzo GT2530 has an adjustable center column which enables me to make quick height adjustments. This is an important feature to have especially after I notice in my viewfinder a twig or stem blocking part of the dragonfly I'm trying to photograph. Tripods without a center column are generally sturdier but I think you'll find the tradeoff in speed of minor adjustments to be beneficial.

If possible, also use a remote control and make sure your forehead is not resting on the camera when you trip the shutter. You'd be amazed how the slightest vibration from your forehead resting on the viewfinder can cause blurriness.

Some photographers are strong proponents of mirror lockup but personally I do not like the delay it causes in the shot. Dragonflies twitch and move around a lot, and that slight delay in using mirror lockup may cause you to miss the best shot by having some part of the dragonfly out of focus. Use a rapid burst of 2-3 shots instead—one may be surprisingly sharper than the others.

Sometimes you will need to get down very low to the ground or put the camera at a steep angle making viewing through the camera's viewfinder cumbersome. An attachment called a right angle finder can come in handy in these situations. It connects to your camera's viewfinder and allows you to look down instead of through the viewfinder. An example of this is shown in the photo on the right.



Use a right angle finder to look through your viewfinder when the camera is low to the ground.

Exposure

Proper exposure is essential and I strongly encourage bracketing your exposures if time permits. If you are not shooting in full manual exposure mode, you will need to know how to use your exposure compensation settings.

Because you will be shooting mostly in bright sunlight, there will be considerable contrast in your subject. Try to select subjects that are either in full sunlight or in full shade with diffused sunlight being best. Dragonflies that are partially in full sunlight and partially in shadow are the most difficult to attain proper exposure. Although I do use fill flash on occasion, I prefer the look of natural light much more. However, contrast is something you will deal with frequently. Shooting in RAW also helps in controlling contrast in your final image.

Here is a photo of a Four-spotted Skimmer in natural diffused sunlight:



Four-spotted Skimmer / Photo by Vic Berardi

In full sunlight, the use of ISO 100 to 200 is usually good enough, but in dimmer light higher ISOs may need to be used. Don't be afraid to use higher ISO settings of 800 or above. With a 300mm lens and a 1.4x tele-extender getting full frame photos of even the smallest dragonflies is generally routine. So, there will be little in the way of cropping which is usually an enemy of high ISO settings.

This photo was taken in very dim lighting with an ISO of 800 at f11 and 1/200 second:



Racket-tailed Emerald / Photo by Vic Berardi

You may find a flash unit useful for filling in shadows and controlling contrast. I use a Canon 580 EX unit on occasion and find it very suitable for dragonfly photography.

When using a flash unit, use a diffuser to lessen the harshness of the flash. Your flash should also have controls on its output. It is important to not have your flash too bright. If you over illuminate the dragonfly with your flash, the photo will look very unnatural. Subtlety is the key when using flash.

The photo on the next page of the very rare Hine's Emerald illustrates how the use of flash can still maintain a natural look. The fill flash highlighted the parts of the insect that were shadowed.



Hine's Emerald / Photo by Vic Berardi

Another way to control contrast is by using circular light diffusers. Portable collapsible diffusers are favorable for field use. I recommend a diameter of 36" for most uses.

Reflectors can also be used at times, but may require an assistant present to aim sunlight directly where it is needed. Reflectors generally are more cumbersome to use than diffusers.

Composition

In terms of composition, you always have a lot of options: including the subject's place in its environment, the amount of color saturation and a message the photographer wants to convey. Try to make your photos as interesting as possible. True, the stunning colors of some dragonflies are all you really need, but sometimes that isn't enough.

For example, the dragonfly doesn't need to dominate the image just enhance it or somehow show it in its environment. An example of this can be seen in this photo of a Band-winged Meadowhawk:



Band-winged Meadowhawk / Photo by Vic Berardi

You don't always need to show the entire dragonfly, like in this photo of a Canada Darner:



Canada Darner / Photo by Vic Berardi

Or a closeup to show some of the finer details, like in this photo of a Blue Dasher:



Blue Dasher / Photo by Vic Berardi

Try to choose subjects that are isolated from the background. Because you will be using higher f/stops, your depth-of-field will be increased and so more of the surrounding vegetation will be in focus. Most of the images above show the dragonfly isolated from the background. This generally makes for a more pleasing image. However, some dragonflies are very striking and even if the background clashes a bit, the photo still can look acceptable. This photo of an Arrowhead Spiketail is an example:



Arrowhead Spiketail / Photo by Vic Berardi

Behavior

It is important to learn the behavior of dragonflies to enhance your photo opportunities. Many dragonflies have predictable behavior. For example, most dragonflies in the skimmer group will land repeatedly on the same perch. Some, like the Prince Baskettail or the Black Saddlebags never seem to land, but eventually do. Equally important is to learn when certain species of dragonflies emerge and are in the active adult stage. Many are active from spring into autumn while some have a very limited time period of activity.

Obviously, learning these behaviors takes time, but it will improve your chances of getting the best photos. As mentioned in the last paragraph concerning the skimmers, the Halloween Pennant and Calico Pennant (both in the skimmer group) like to land on the top of slender vegetation.

The problem with this is that these types of plants will sway in the very slightest breeze making focusing difficult. So, in the case of the pennants, try taking multiple shots to ensure at least one will be in focus. It may be hard to get a tight shot with super sharpness so back away a bit and capture the insect's environment and behavior like in the photo on the right, of a Halloween Pennant.

Another very common skimmer found in most of the central and eastern parts of the United States, the Eastern Pondhawk, likes to stay near the ground. Most photos of this species appear cluttered as a result. So, in the case of this dragonfly wait until it lands in a spot where it will be more isolated in the photo (see next page for photo).



Halloween Pennant / Photo by Vic Berardi



Eastern Podhawk / Photo by Vic Berardi

Further Reading

To learn more about dragonflies, check out these great books:

- ◆ **Stokes Beginner's Guide to Dragonflies**
by Blair Nikula, Jackie Sones, & Donald and Lillian Stokes
- ◆ **Dragonflies Through Binoculars, A Field Guide to Dragonflies of North America**
by Sidney W. Dunkle
- ◆ **Dragonflies and Damselflies of Texas and the South Central United States**
by John C. Abbott
- ◆ **Dragonflies of the North Woods, Second Edition**
by Kurt Mead
- ◆ **Dragonflies and Damselflies of Northeast Ohio, Second Edition**
by Larry Rosche, Judy Semroc, Linda Gilbert and Jennifer Brumfield

Conclusion

Adding dragonfly photography to your repertoire will enhance your appreciation of nature and you might be surprised at your results if you work at it. Spend time reading and learning as much as you can before venturing out in the field. Once you get to a good spot take your time, be patient and concentrate on just a few shots while keeping in mind all the elements discussed above. Few subjects can be photographed in midday under bright sunlight so why not occupy your day photographing dragonflies!

About the Author



Vic Berardi is a raptor lover that lives in the Midwest. He is the founder of the Illinois Beach State Park Hawk Watch and every weekend of the year you'll find him searching for hawks and photographing them. Several of his photographs have been published in a leading raptor journal and in articles he has written. During the year he gives presentations teaching others about hawks and hawk migration. Vic also photographs dragonflies and wild flowers and is always respectful of nature and its creatures.

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