



## 'Shooting the Alley' – A guide to capturing storms and severe weather on camera.



Following on from the Tornado Project article, and in keeping with all projects undertaken as part of the Elemental Project, I have put together this useful handout. The aim is to provide some useful pointers and the workflow I follow when taking photographs of severe weather in locations such as Tornado Alley. It is generalised, compact (yet informative) and aimed at all levels of camera enthusiasts. More specialised areas, such as lightning photography will be featured on the next Project (Extreme Heat) so do keep checking the website for updates.

### INTRODUCTION

There is no question that extreme weather is a very challenging subject to capture on camera. Lighting and subsequently exposure is either one end of the spectrum or the other (or sometimes a combination of both), the effect of the ambient environment (heat, humidity and precipitation) affects both photographer and camera equipment and finally safety is a key issue. However, with a few useful pointers the odds of capturing good quality impact images can be significantly increased. With this in mind, I will share my own processes when working in such an extreme and challenging environment.

### EQUIPMENT



**Camera & lenses** - A good digital SLR camera is a must. A quality camera system that allows full manual control of the many settings and allows interchange of different kinds of lenses. In order to streamline the amount of equipment I take and yet maximise on all eventualities I simplify my lens choice. Choose wisely and three carefully chosen lenses are all you will ever need.

When packing and deciding which lenses to take/use think **WAZ** (**W**ide, **A**ll & **Z**oom) and you will be covered for everything Mother Nature throws at you.

Personally I use the Olympus E3 DSLR, an ideal weather and dust-proof camera for this subject, and the following lenses (I also take with me 2 dslr's and hence why the additional lenses):-

**W**ide - 7-14mm & 8mm fisheye

**A**ll rounder - 12-60mm

**Z**oom - 50-200mm & 90-250mm

My reasoning for this is as follows:-



**Wide** - Mother Nature can be a massive (size) subject to capture. Storms can, and will, stretch from one end of the horizon to the other. To capture this through a camera lens and portray the intensity and scale of the subject is not easy. To help achieve that 'wow' factor with such storms I use a couple of very wide angle lenses. The first is the Olympus 7-14mm (14-28mm: 35mm equivalent) which gives very little barrel distortion and is marvellous at capturing the entire storm structure in one shot. In addition, and to give a different perspective, I also use an 8mm fisheye. This gives a very unique and different angle on the same subject. I would strongly recommend acquiring a fisheye lens for this subject matter.

**All rounder** - This will probably be the most used lens. The Olympus 12-60mm SWD (24-120mm: 35mm equivalent) covers a good focal spectrum in one lens and hence me calling it an all rounder. Once you take away the planning, Mother Nature is very much a reactive subject. An all rounder such as this is great to leave on the camera and when you are ready to shoot, pick it up and capture. It can also be used anywhere, capturing anything from logistical operations to storms in motion. One particular operation I use with this all rounder lens is panorama. As well as using the wide angle lens to capture entire storm structure I also use the 12-60mm with panorama in mind. It allows me to get closer on a particular storm or skyscape and then pan around to cover a 180 field of view. I then import the images into stitching software to produce panoramas. I always 'think' panorama when using this camera to capture storms. Another good subject matter for this type of lens is lightning which is difficult to capture well. I will be producing a Lightning photography special on the next project in late July (Extreme Heat). Keep checking the website for updates.



**Zoom** - This is the least used of my lenses whilst shooting Mother Nature although I always take it with me because you never know! The Olympus 50-200mm SWD (100-400mm: 35mm equivalent) is a great zoom lens. It is very handy when obviously distance needs to be covered through the lens, for example capturing intense rain or hail falling within the core of a storm. If you are lucky enough to see a tornado then the lens is perfect for grabbing vortex detail. Another good use of the lens is getting real close up on explosive convective clouds. With the right composition it can look like a bomb exploding and produce very much a 'wow' factor shot.

## ACCESSORIES



**Tripod** - I always take with me 2 tripods, one for each camera. Whilst a lot of the time the camera is being used hand-held, there are many occasions where a tripod is a must. Such examples would be lightning, low light exposures and time-lapse. Each tripod has a different ball head attachment. One a vertical pistol grip and the other a horizontal pistol grip. These allow me full fast manipulation and orientation of the camera in any field of view. This is a highly recommended accessory to take.

**Remote cable** - I always use the remote cable for lightning and lunar photography. The Olympus RC1 cable is specifically designed for the E3. (Check with your own camera manufacturer for details). It eliminates any camera vibration allowing me to depress the shutter button away from the camera. A simple press of the shutter release button can cause lots of camera vibration.

**Time lapse controller** - If you have this equipment then take it. Severe weather and storms makes for some of the best time lapse footage you will see. Some dslr's incorporate a time lapse control facility (intervalometer or interval mode). I personally use the excellent PClix controller which allows full control of almost any time interval (0.1s to 24hrs) and which connects to the Olympus E3 via a remote cable. The unit is tiny (size of a cigarette box) and I normally clip mine to the tripod when shooting time lapse. Time lapse photography is excellent for capturing the movement of clouds, especially detailing the different speed and direction at different levels (called wind sheer). It is really mesmerising. Also watching a convective cumulus cloud explode into life makes amazing footage. I will be producing a time lapse photography special on the next project in late July (Extreme Heat). Keep checking the website for updates.



**Memory cards** - Sounds obvious but take plenty of storage cards, more than you think you'll need. When you are capturing Mother Nature expect the unexpected. More often than not an unusual situation will present itself and emotions/adrenalin/excitement runs very high. In these situations you will tend to shoot more. I always shoot in RAW + JPEG mode which take up plenty of memory. I use 8GB compact flash cards and normally take 4 of these with me together with a few 4GB and 2GB spare cards.

**Portable storage device (PSD)** - More appropriate when travelling overseas and this is in addition to taking a laptop. At the end of every days shoot I will download images to my laptop and then copy over to a PSD. I normally take one of the USB powered devices of around 180GB. That should be plenty enough for a week or two. After learning the hard way, I am pretty paranoid about data backup on trips. The PSD gives me peace of mind and I also take dual layer DVD's as a secondary backup media.

## CAMERA BASICS

There is no single golden rule or magic formula to follow in order to capture Mother Nature at her best. Sorry to disappoint! However I will run you through the basics and methodology that I adopt which will hopefully improve your chances of getting great storm photos from your camera. There are also separate areas of storm photography, such as lightning and time lapse which I will be concentrating on specifically on the next project (Extreme Heat).

I previously touched upon the emotion and adrenalin rush that can occur when shooting Mother Nature. If you are on a shoot and suddenly a tornado, immense lightning or giant hail confronts you it is so easy to fall into the human reaction trap and forget all the camera basics and just click away, without thinking. I know because I have been there (and it still happens) as Mother Nature never ceases to amaze. On many occasions I have plucked the camera from the bag forgetting to reset from the previous evening shoot and consequently the camera settings were incorrect. When you eventually realise, it's too late! In this respect I made up a little acronym to help me through the process. I call it **ACE** and here is an explanation of how to apply it. Think **ACE** all the time when shooting.

**Aperture:** I mainly always shoot in Aperture (A) mode (Excluding specialised areas such as Lightning photography). Set the camera to a mid-range aperture setting, F5.6 is a good all round setting. Get into the habit of setting this prior to arrival on location on a daily basis.

**Composition:** When you have found or arrived at the exact shoot location think composition.

1. Firstly keep land in bottom third of frame and sky in the top two-thirds (opposite to landscape photography).



2. Secondly look carefully at your foreground subject. Hunt around (if you get chance) for colours that will maximise exposure. Look for the neutral colours such as fields full of wheat, corn, and dry grass. Also yellows such as rape and sunflower really set off a good stormy skyscape. I frequently run around, when on-site, like a headless chicken to find a good composition foreground. Also move around, don't shoot everything in one spot. In addition and if possible, look for a foreground object to include within the frame. Something like a road sign (street name signs look good), or farm building, machinery etc in the foreground.



3. Finally, think panorama. Using the all rounder lens 12-60mm I always compose a number of images across the horizon, with panorama in mind. Take 3 or 4 shots in portrait and landscape across the horizon keeping the horizon line as constant as possible through each frame. Hold the AEL for each shot (to

maintain constant exposure).

**E- Exposure:** Firstly, with two thirds of the sky in the frame, I let the camera automatically expose (choose shutter speed) based upon this. With a good foreground subject/colour (as mentioned in Composition) this should expose reasonably well. Then, repeat the shot by exposing for the bottom third of the frame. Finally, I repeat the shot again exposing for part of the frame that is somewhere in between the tone of the sky and ground. Between the three images one of them will yield the best exposure results. This really is fine tune method of bracketing and personally I find it works better than using the in-camera bracketing. In addition, there will be a good range of exposed images of the same subject should you wish to post process.

Once you have **ACE** in the mindset then try using different lenses on the same scene. This will give a different view of the same subject thereby increasing the variety (and stock).

With **ACE** the odds of capturing a well exposed image with good composition, and scale through perspective will increase significantly, so do give it a go. Don't forget to try the panorama. Panorama really gives a 'wow' factor.

## **SAFETY & POSITIONING**

With all genre of photography it is very important to have a sound knowledge of your subject matter in order to be successful and safe, especially with hazardous subjects such as extreme weather. Firstly, I would highly recommend that anyone desiring to stormchase (in the USA) for the first time, book via a credible stormchasing tour company like Silver Lining Tours. If you decide not to travel with a tour then here area a few pointers:

Access to radar via internet/laptop is desirable. One can then track precipitation/storm movement. I would not recommend anyone chase storms of any magnitude without this equipment, for safety reasons.

For a storm moving from the south-west to north-east (common mover) I position myself on the south/south east flank of a storm. This will ensure I remain out of any precipitation enjoy and capture the heart of the storm and also be in a good position to follow and move with the storm, assuming the road network allows.

Personally I try to view and capture a storm up close and from a distance. This gives different angles and equally interesting compositions. Things to look for which make photogenic subjects:-

*Anvil* - The flat, spreading top of a Cb (cumulonimbus cloud), often shaped like an anvil and normally seen at the front and rear flank of storms.

*Mammatus* - Rounded, sack-like protrusions hanging from the underside of a cloud (usually a thunderstorm anvil).

A combination of the above, especially with low sun level is amazingly spectacular.



*Gust front* - The leading edge of gusty surface winds from thunderstorm downdrafts.

*Flanking Line* - A line of towering cumulus clouds connected to and extending outward from the most active part of a supercell, normally on the southwest side. The line normally has a stair-step appearance.

## WORKFLOW

Finally, my workflow or working process from camera capture to delivery/output. Each and every photographer will have their own preferred workflow relative to their subject, manner of working and hardware/software. This is mine and how it applies for my elemental photography.

Camera: ---> shoot RAW & JPEG ---> Camera Storage Card

Download: (daily) laptop ---> PSD ---> DVD

Processing General: organise daily folders ----> select ---> CS3 adjustment ---> save high res original ---> save high res JPEG ---> save low res JPEG ---> upload website/distribute

Panorama: select ---> software stitch ---> CS3 adjustment ---> save high res original ---> save high res JPEG ---> save low res JPEG ---> upload website/distribute

Time Lapse: select ---> photo software batch edit/organise ---> photo software resize 640x480 ---> video software import & run 15-20fps ---> save high res original ---> save broadband high - --> save broadband low ---> upload website/distribute

Backup: laptop/PSD/DVD

Software:-

Image editing (main) - Photoshop CS3

Image editing (batch) - PhotoScape

Video (time lapse) - Quick Time Pro

Panorama stitching - Panorama Maker 4 Pro

Photo slide show - Pro Show Gold

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Next stop: - The blistering heat of Death Valley/Grand Canyon and monsoons of Arizona. Coming at the end of July. Keep checking [www.elementalproject.com](http://www.elementalproject.com) for updates.

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## Tornado Project Samples



Supercell in Iowa – Olympus E3, 12-60mm SWD, 4 photos stitched



Tornado near Carpenter, Iowa - Olympus E3, 12-60mm SWD



Team watching supercell and wall cloud, Oklahoma - Olympus E3, 12-60mm SWD, 2 photos stitched



Fisheye view of supercell, Oklahoma - Olympus E3, 8mm fisheye