

EOS Immersion Seminars 2012: Class Notes

# Part 4

# Landscape and Travel

# Photography



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**Please Note:** *The content of this document focuses on current EOS Digital SLRs, including the EOS-1D X, EOS 5D Mark III, EOS 5D Mark II, EOS 7D, EOS 60D, and EOS Rebel T4i, T3i, and T3 models. Much of the information contained herein applies fully or partially to discontinued EOS models, but some does not.*

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## I. Introduction

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High quality landscape and travel photographs don't usually happen by accident. As with most other kinds of photography, they require a trained eye and good shutter timing as well as being in the right place at the right time with the right equipment. They also often benefit from thorough advance planning and previsualization. You may not always end up with exactly what you had in mind before you began, but sometimes that's the fun of it; you just might outdo yourself and achieve something far greater than you had imagined. This installment of the 2012 EOS Immersion Seminars Class Notes is intended to give you the information you need to achieve a high level of quality in landscape and travel photography that you can be proud of, images that you can enjoy and share with others both now and into the future.



*Great landscape photography has the power to inspire and humble us: Whether it's the grandeur of a natural environment or the beauty of a distinctive urban skyline, landscape photography done well is a unique form of artistic expression. Photo by Adam Jones, Canon Explorer of Light.*

### 1. Trip Preparation

It's one thing to photograph a place you're already familiar with, but it's another thing entirely to plan a photo trip to a place you've never been to before, and may never visit again. We will discuss some of the things you can do to research your trip and prepare your camera gear before you walk out the door. See "[II. Trip Preparation](#)" for more information.

## 2. Landscape Elements

The elements of good landscape photography usually include things like interesting lighting and exceptional sharpness, but they also involve seeing your subject from different perspectives and finding the most interesting aspects of it. Sometimes your most successful images will be grand vistas, while at other times they may be tantalizing close-ups. As you explore the scene, you can discover its essence and create your own individual interpretation. In many cases, you can come back to the same location in different seasons and make a completely different visual statement. See “[III. Landscape Elements](#)” for more information.

## 3. Travel Elements

The most successful travel photographs tend to depict a sense of what makes a given place unique, whether it involves a specific foreign culture or an abstract yet distinguishing element in the scene. At the same time, it’s important to seek out a fresh view of your subject in order to make your photos more interesting than the typical cliché snapshots that ordinary tourists bring home. If you study the culture of the people and places you’re planning to visit before you arrive, you’ll know what to look for, such as unique clothing, hair and jewelry or indigenous products both natural and man-made. See “[IV. Travel Elements](#)” for more information.

## 4. Exposure Challenges

Getting a good exposure isn’t always easy, but it’s absolutely essential to achieving high-quality photography. Most beginners rely on automatic shooting modes until they learn why it’s desirable to control basic camera settings such as shutter speeds, apertures, and ISO speeds manually. Once you’ve reached that level of experience, you can progress to more advanced forms of creative expression including RAW data capture and high dynamic range imaging. We will explore all of these areas and more to give you a taste of the possibilities. See “[V. Exposure Challenges](#)” for more information.

## 5. Creative Challenges

Speaking of creative expression, there are plenty of challenges to deal with for high quality landscape and travel photography. Chief among these is good composition, which involves things like effective camera positioning and lens selection. It’s also worthwhile to learn how to control your viewer’s attention by isolating the main subject and how to use visual clues to provide a sense of scale. Other challenges in landscape and travel photography include the creation of effective panoramic images as well as interesting close-ups and macro shots. See “[VI. Creative Challenges](#)” for more information.

## 6. Technical Issues in the Field

Although good natural lighting is always welcome, you need to know how to overcome problems with glare and reflections when they occur. A working knowledge of circular polarizing filters comes in handy for this purpose. You may also find it useful to add more light in dark conditions, or supplement the existing light to create a more

professional look in your photos. An understanding of electronic flash equipment is helpful in this area. Last but not least, useful accessories such as tripods, remote release cables, and image stabilizer lenses can help make the difference between average shots and great ones. See [“VII. Technical Issues in the Field”](#) for more information.

Read on for detailed discussion of all these topics!

## II. Trip Preparation

No matter how much preparation you do, there are bound to be unexpected glitches that can derail your plans. That's life! By the same token, though, good planning makes good results more likely. Here are several tips to get you started on preparing for your next photo trip.

### 1. Online Resources

If you're considering a photo trip, chances are good that you've invested a fair amount of money for travel, lodging, food and incidentals, not to mention cameras, lenses and related accessories. With all that at stake, why wouldn't you want to use free online resources for pre-travel research?

#### U.S. Department of State

The State Department's web site is a good place to start researching international travel. You can learn how to get or renew your passport, determine if you will need to obtain a visa for the countries you plan to visit, get current travel warnings and read various tips for travelling abroad.

<http://www.state.gov/travel/>



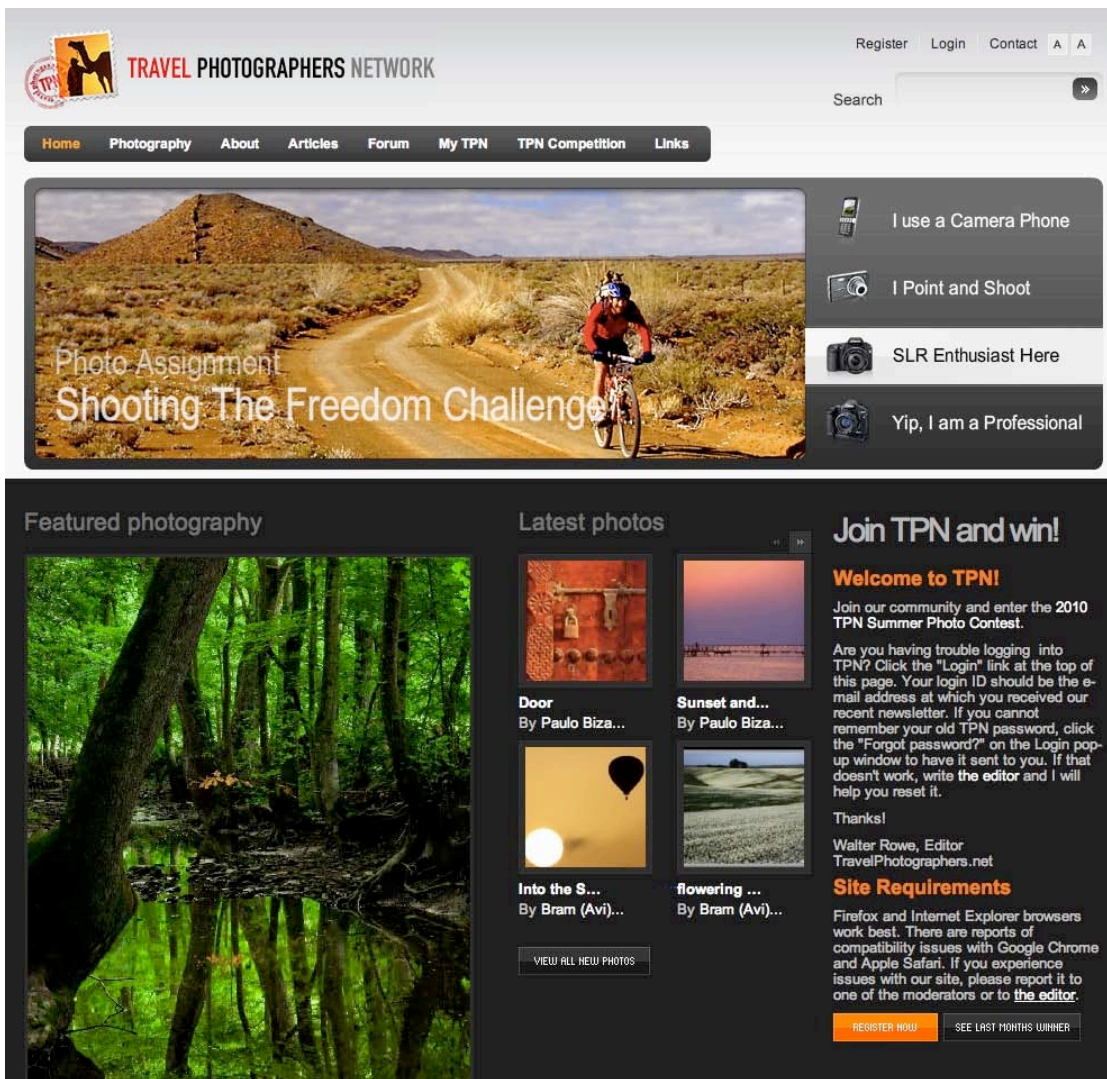
U.S. Department of State web site



### The Travel Photographers Network

This web site is packed with great images and hundreds of helpful articles about travel photography. The articles are written by, for and about travel photography and travel photographers. You can research a particular geographic area or learn more about specific travel photo topics. You can also upload your own photos for review by others who can help you learn how to improve your techniques.

<http://www.travelphotographers.net>

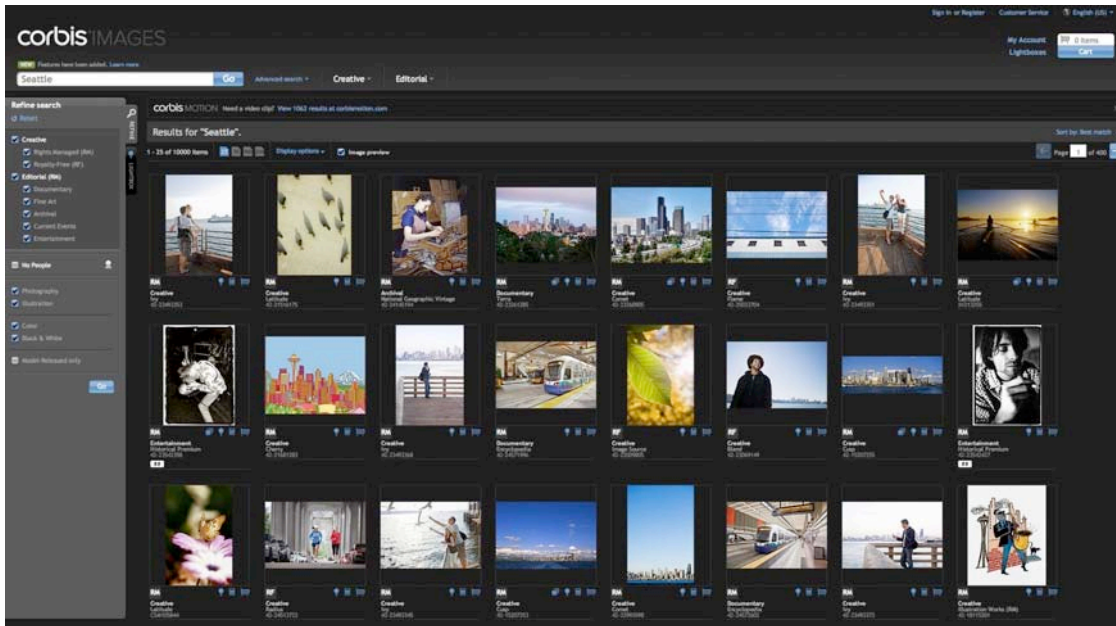


Travel Photographers Network

### Stock Photo Agencies

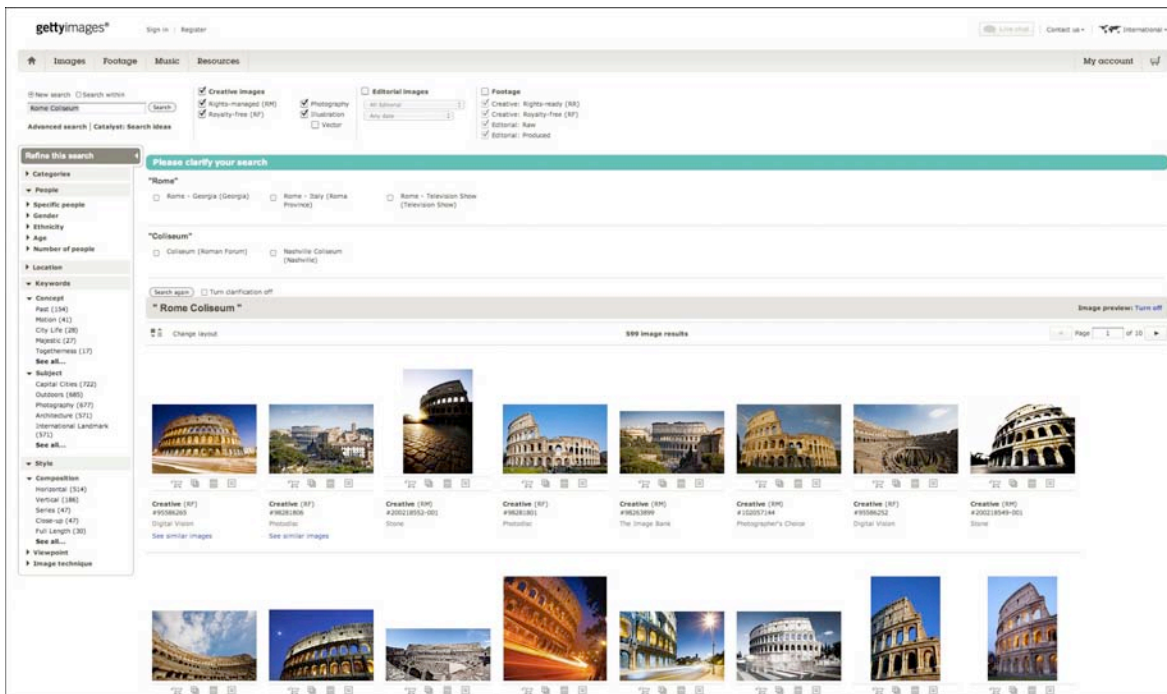
Stock photo agencies have extensive online databases that allow you to search and review professional photos of the locations you plan to visit. By studying them, you can see the angles and lighting conditions other photographers have chosen, which may help to spur your imagination and give you some ideas for making your own photos better.

<http://www.corbisimages.com/>



Corbis Images Website

<http://www.gettyimages.com/>



Getty Images Website

These are just two of the top stock photo agencies, but there are plenty of others that you can find through your favorite web search program.

### Tourist Bureaus

Most countries, states and major metropolitan areas have online tourist bureaus with useful information about local attractions, hotels, and restaurants. Here are a few examples:

<http://www.jnto.go.jp/eng/>

The screenshot shows the Japan National Tourism Organization (JNTO) website. At the top, there is a navigation bar with a language selector and local sites dropdown. Below this is a main menu with categories like 'Find a Location', 'Arrange Your Travel', 'Japan In-Depth', and 'Site Search'. A secondary navigation bar includes 'Useful Tools', 'Japan Photo Galleries', 'Movie Channel', 'Map of Japan', and 'Plan, Check and Go!'. The main content area features a large photo gallery of lanterns floating on a river, with a title 'Lantern Floating Ceremony' and location 'Hiroshima City'. Below the gallery are several sections: 'JNTO Recommends' with a 'Plan, Check and Go!' button and 'Train and map information' link; 'Highlights' with articles on 'World Heritage Sites in Japan', 'Eco Assets in Hokkaido', 'Sightseeing of Mt. Fuji', and 'Japan's Art & Culture'; 'Latest Topics' with recent news items; and 'JNTO's Partners' listing JAL, Narita Express, and JAPANICAN.com. There is also a 'JNTO Supports' section with logos for 'Visit Japan Campaign', 'Visit Japan 2010', and 'Visit Japan Channel'.

Japan National Tourism Organization Website

<http://www.enjoyillinois.com/>

Enjoy Illinois Website

<http://www.visitlondon.com/>

The screenshot shows the Visit London website interface. At the top, there are navigation tabs for 'Visitors', 'Event Organisers', 'Media', 'Partners', 'Travel Trade', and 'VL Awards'. A search bar is prominently displayed. Below the navigation, a main menu includes 'Home', 'Accommodation', 'Places To Go', 'What's On', '2012', 'London Areas', 'Travel', 'Maps & Guides', 'Special Offers', and 'Blog'. The main content area features a large featured article for 'Danton's Death' with a photo of Toby Stephens and a 'read more' link. To the right, there are links for 'Burn The Floor', 'Greenwich Film Festival', and 'Top 10 Attractions'. Below this is a 'Search for London Hotels and City Breaks' section with a form for selecting dates, rooms, and adults/children. An advertisement for 'War Horse' is also visible. Further down, there are sections for 'Places To Go in London' with sub-sections for shopping, restaurant news, and historic houses, and a 'Shop for London's Best' section with offers for theatre tickets, attractions, and the London Pass.

Visit London Website

If you plan to visit a location in the United States, you can often find toll-free call centers staffed with knowledgeable individuals who can answer your questions about specific travel-related issues.

## 2. Seasonal Weather

Knowing what to expect in terms of weather can really make a difference in your travelling plans, both in terms of clothing as well as photo gear. Although weather conditions for specific dates may be impossible to predict accurately before you depart, seasonal averages for things like temperature, humidity and precipitation are relatively easy to find. Here are some useful websites for detailed weather information:

<http://www.weather.com/>

The screenshot shows the weather.com website interface. At the top, there's a navigation bar with 'Home', 'Forecasts', 'Severe Weather', 'Maps', 'Weather Apps', 'Video', 'iWitness Weather', 'Travel', 'Outdoors', 'Mobile & Downloads', and 'On TV'. Below this is a search bar with the text 'Enter ZIP, City or Place (e.g. Disney World)' and a 'FIND WEATHER' button. To the right of the search bar are links for 'My Saved Locations', 'Add a Location', 'SEND TO MY PHONE', and 'PUT THIS ON MY DESKTOP'. The main content area features several sections: a Toyota Prius advertisement, a 'LIVE CHAT' section, a 'Get started with Random Acts of Prius' section, and a 'Today's Headlines' section. The 'Today's Headlines' section includes a sub-section for 'Oppressive heat in the Heartland' with a list of related articles and a map of the United States showing 'Thursday's Highs' for July 15, 2010. The map shows high temperatures across the country, with the highest temperatures (up to 107) in the central and southern regions. Other sections include 'On TV' with a 'BEACH PARTY' advertisement and 'Sponsored Links in New York' featuring an article about 'Acai Berry EXPOSED'.

Check local weather conditions on The Weather Channel web site.

<http://internationalweather.com/>

The screenshot shows the International Weather website interface. At the top, there's a navigation bar with links like Home, Your Weather, Your Options, Weather on Your Site, US Weather, and NewsChannels. Below this is a large world map with weather icons and temperature readings for various cities. A sidebar on the left lists regions like Africa, Asia, Europe, etc. The main content area is divided into several sections: 'International Weather' with a temperature scale, 'Current Temperatures' for various cities, 'US News' and 'World News' sections with headlines and images, and 'Learn Arabic for Free' and 'Learn Hebrew in 10 Days' sections.

The International Weather Website is another useful weather research source.

### 3. Sunrise / Sunset

Sun position is a major factor for all kinds of outdoor photography, but especially for sunrise and sunset photos. With that in mind, it can be very helpful to know when and

where sunrise and sunset will occur for the locations you plan to photograph during your expeditions. Several web sites including the U.S. Naval Observatory's Naval Oceanography Portal provide the information you'll need:

<http://www.usno.navy.mil/USNO/astronomical-applications/data-services>



The screenshot shows the Naval Oceanography Portal website. The header features the USNO logo and the text "Naval Oceanography Portal". Below the header is a navigation menu with tabs for Home, Time, Earth Orientation, Astronomy, Meteorology, Oceanography, and Ice. A breadcrumb trail reads: "You are here: Home → USNO → Astronomical Applications → Data Services". On the left side, there is a sidebar menu with "Data Services" selected. The main content area is titled "Data Services" and lists several categories of information:

- Rise/Set/Transit/Twilight Data**
  - Complete Sun and Moon Data for One Day
  - Table of Sunrise/Sunset, Moonrise/Moonset, or Twilight Times for an Entire Year
  - Rise/Set/Transit Times for Major Solar System Objects and Bright Stars
  - Duration of Daylight/Darkness Table for One Year
- Phases of the Moon**
  - Dates of Primary Phases of the Moon
  - Fraction of the Moon Illuminated
  - What the Moon Looks Like Today
- Eclipses and Transits**
  - Eclipses of the Sun and Moon
  - Solar Eclipse Computer: Computes circumstances for selected solar eclipses at any given location.
  - Lunar Eclipse Computer: Computes circumstances for selected lunar eclipses at any given location.
  - Recent and Upcoming Transits of Mercury and Venus
  - Transit Computer: Computes circumstances for selected transits of Mercury and Venus at any given location.
- Positions of Selected Celestial Objects**
  - Altitude and Azimuth of the Sun or Moon During One Day
  - Topocentric Configuration of Major Solar System Bodies: Provides tables of low precision topocentric position data for the Sun, Moon, and major planets.
  - Geocentric Positions of Major Solar System Objects and Bright Stars: Provides high precision geocentric position data for the Sun, Moon, major planets and selected bright stars.
  - Topocentric Positions of Major Solar System Objects and Bright Stars: Provides high precision topocentric position data for the Sun, Moon, major planets and selected bright stars.
- Synthetic Views of the Earth and Solar System Bodies**
  - Day and Night Across the Earth: Creates synthetic views of the Earth's surface (in grayscale or color) for any date and time.
  - Apparent Disk of Solar System Object: Creates a synthetic image of the telescopic appearance of the Moon or other solar system object for specified date and time.
- Dates**
  - Earth's Seasons - Equinoxes, Solstices, Perihelion, and Aphelion 2000-2020
  - Spring Phenomena, 25 BCE to 38 CE
  - Julian Date Conversion: Calendar Date to Julian Date, Julian Date to Calendar Date

The Naval Oceanography Portal has detailed information on sunrises and sunsets among other things.

#### 4. Cultural Events

If your travel itinerary takes you to cities, towns or other populated areas, chances are good that cultural events may occur during your trip. These events can provide great opportunities for interesting photos, or you may want to avoid them if they will interfere



with your plans. Either way, forewarned is forearmed. Here are a few websites to investigate:

<http://www.whatsonwhen.com/sisp/index.htm>

The screenshot shows the homepage of the website 'whatsonwhen', which is described as 'The worldwide events guide from Frommer's'. The navigation bar includes categories such as Arts, Classical Music, Festivals & Heritage, Gay & Lesbian, Kids & Family, Lifestyle, Music & Nightlife, Science & Knowledge, Sports & Outdoors, and Weird & Wonderful. There are also buttons for 'events', 'attractions', 'guides', and 'festivals book'. A search box on the right allows users to find events by keyword, location, category, and date. The main content area features a featured event, 'Alpine Beard Festival', with a photo of three men with long beards. Below this are sections for 'Happening This Week', 'our top 5', 'your top 5', 'Festivals & Heritage', 'Music & Nightlife', 'Sport & Outdoors', and 'Arts'. There are also promotional banners for 'Compare cheap flights with TRAVELZOO' and 'Compare cheap hotels with TRAVELZOO', and a 'Follow us on twitter' button. A book cover titled '300 UNMISSABLE EVENTS & FESTIVALS AROUND THE WORLD' is also visible.

<http://worldeventsdiary.com/>

The screenshot shows the World Events Diary website interface. At the top, there is a search bar with a magnifying glass icon and a 'Find' button. Below the search bar are navigation tabs for continents: europe, africa, asia, americas, and australia. The main content area features a world map with colored regions and a legend. The legend lists the continents with their corresponding colors: europe (blue), africa (green), americas (red), australia (purple), and asia (orange). Below the map is the 'World Events Diary' title and a welcome message. The page lists several events with small images and brief descriptions:

- The Stellenbosch Wine Festival**: Africa Stellenbosch Food+Drink 2010 August. Description: As South Africa's oenology reputation grows and grows- the Cape is home to some of the finest vineyards in the world- so the cause for promotion and celebration of the vintages becomes more marked.
- The Edinburgh International Festival**: Europe Scotland Edinburgh Culture 2010 August. Description: The Edinburgh Festival is Europe's, if not the world's, most famous arts festivals..
- La Tomatina**: Europe Spain Bunol Culture 2010 August. Description: Everybody (ok, so mostly blokes) has some kind of fail to tell about their rubber flicking exploits as a school kid, or their brilliance with their aim in the school canteen. And the reason? Despite muchos school credo attached to such machismo, there can be no doubt- all these braggarts desperately want to get back to honing their throwing techniques.
- The Great British Beer Festival**: Europe Earls Court London Food+Drink 2010 August. Description: British beer is distinctly different to that brewed elsewhere across Europe and the world. It is unique, for it is brewed to be enjoyed and shared.

On the right side of the screenshot, there is an Expedia.co.uk widget with the slogan 'Make it happen.' It includes options for 'Flight + Hotel', 'Flight', and 'Hotel'. Below these are fields for 'Leaving from:', 'Going to:', 'Departing:' (set to 22/7/2010), 'Returning:' (set to 27/7/2010), 'Adult (19-64):' (set to 2), 'Children (0-18):' (set to 0), and 'Seniors:' (set to 0). A 'Search' button is at the bottom of the widget.

<http://www.worldtravelguide.net/>

**World Travel Guide**

LAST CHANCE TO SAVE FOR EARLY SPRING!  
**Save up to 30%**  
on rooms at select Walt Disney World Resort hotels for stays most nights 2/17-4/16/11. Book by 2/13/11. [GET OFFER DETAILS](#)

★ | DESTINATIONS | FLIGHTS | HOTELS | CARS | HOLIDAYS | TRAVEL DEALS | TOURS

Search

## What's hot?

These are the very latest World Travel Guide updates - find new travel ideas, most recent events and what countries and cities are popular on the site right now.

*Take control >*

*World Travel Guide offers inspirational destination guides, features, travel deals, events and more*

Where do you want to go?

Be Inspired

- Activity & adventure holidays
- Adrenaline Beach breaks
- City breaks Cruise holidays
- Cultural breaks
- Family holidays
- Health & relaxation breaks
- Inspire Me Luxury holidays
- Romantic holidays Ski breaks

Popular destinations now

- Germany**  
Occupying a prime position in the heart of Europe - both literally and figuratively - today's...
- Sri Lanka**  
A teardrop-shaped island cast adrift in the Indian Ocean, Sri Lanka is filled with cultural and...
- Singapore**  
Cultural melting pot and dazzling example of the region's economic successes, wealthy Singapore...
- Morocco**  
As you relax in your hammam (steam bath), tuck into your tagine (stew), bargain in the souks or...

Because American Express Cardmembers can travel on their terms.

Learn more.

Top events

- 28 **Quebec City** Winter carnival.

*These websites are great resources for researching cultural events that may be happening during your photo trip.*

## 5. Gear Check

A wise traveler once said: “Bring twice the money and half the clothes.” This is excellent advice for most of us, especially those who don’t travel for a living. You don’t want to skimp too much in terms of clothing, but you may be able to cut down on the amount of items you bring along, especially if you can launder some of them during the trip. When it comes to photo gear, you may find that it makes more sense to carry a few zoom lenses than a bag full of fixed focal length optics. Check your gadget bag before you leave to remove non-essential items, but don’t forget to bring along spare batteries and extra memory cards. It is also a very good idea to formulate a check list and use it to ensure that you don’t forget something crucial before you walk out the door.

### Trip Checklist

<p><b>Trip Prep</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Trip Itinerary</li> <li><input type="checkbox"/> Confirm flight</li> <li><input type="checkbox"/> Car service</li> <li><input type="checkbox"/> Print boarding pass</li> <li><input type="checkbox"/> Maps</li> <li><input type="checkbox"/> Location vet                             <ul style="list-style-type: none"> <li><i>Weather</i></li> <li><i>Restaurants</i></li> <li><i>Sights</i></li> <li><i>PhotoOps</i></li> </ul> </li> <li><input type="checkbox"/> Remove sharps</li> <li><input type="checkbox"/> Note to Eric</li> <li><input type="checkbox"/> Charge batteries</li> </ul> <p><b>Clothing</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Raincoat / Down</li> <li><input type="checkbox"/> Fleece</li> <li><input type="checkbox"/> Sport coat</li> <li><input type="checkbox"/> Dress sweater</li> <li><input type="checkbox"/> Dress shoes</li> <li><input type="checkbox"/> Pants</li> <li><input type="checkbox"/> Belts</li>   <li><input type="checkbox"/> Dress shirt</li> <li><input type="checkbox"/> Casual shirt</li> <li><input type="checkbox"/> T-shirts</li> <li><input type="checkbox"/> MS shirts</li>   <li><input type="checkbox"/> Underwear</li> <li><input type="checkbox"/> Athletic sox</li> <li><input type="checkbox"/> Dress sox</li>   <li><input type="checkbox"/> Swimsuit</li> <li><input type="checkbox"/> Sweats</li> <li><input type="checkbox"/> Gloves</li> <li><input type="checkbox"/> Wool cap</li> <li><input type="checkbox"/> Ball Cap</li>   <li><input type="checkbox"/> Toiletries</li> <li><input type="checkbox"/> Plastic bag -lotions</li>   <li><input type="checkbox"/> Day pack</li> <li><input type="checkbox"/> Towel (Thanks Ford!)</li> <li><input type="checkbox"/> Man Purse</li> <li><input type="checkbox"/> Gum / Mints</li> <li><input type="checkbox"/> Chapstick</li> <li><input type="checkbox"/></li> </ul>	<p><b>Personal Effects</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Wallet &amp; ID</li> <li><input type="checkbox"/> Cash \$\$\$</li> <li><input type="checkbox"/> Passport</li> <li><input type="checkbox"/> Cell Phone &amp; charger</li> <li><input type="checkbox"/> Cell headset</li> <li><input type="checkbox"/> Headphones</li> <li><input type="checkbox"/> Zune</li>   <li><input type="checkbox"/> Notebook / log</li> <li><input type="checkbox"/> 3 Eyeglasses (<i>reg-PC-sun</i>)</li> <li><input type="checkbox"/> Business cards &amp; holder</li> <li><input type="checkbox"/> Scotch tape</li> <li><input type="checkbox"/> Reading material</li> </ul> <p><b>Computer Gear</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Laptop</li> <li><input type="checkbox"/> Case or covering</li> <li><input type="checkbox"/> Webcam</li> <li><input type="checkbox"/> DVDs</li> <li><input type="checkbox"/> Portable hard drive</li> </ul> <p><b>Accessories</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> AC cord</li> <li><input type="checkbox"/> Multiplug</li> <li><input type="checkbox"/> Mini Mouse</li> <li><input type="checkbox"/> Card reader</li> <li><input type="checkbox"/> Mini light</li> <li><input type="checkbox"/> Network cord</li> <li><input type="checkbox"/> Streets &amp; Trips GPS</li> </ul> <p><b>Camera Gear</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> DSLR &amp; lenses</li> <li><input type="checkbox"/> CF cards</li> <li><input type="checkbox"/> Flash</li> <li><input type="checkbox"/> Camera battery &amp; charger</li> <li><input type="checkbox"/> Compact P&amp;S w/charger</li> <li><input type="checkbox"/> PhotoTracker GPS</li> <li><input type="checkbox"/> Tripod &amp; Bubble level</li> <li><input type="checkbox"/> 3D rig</li> <li><input type="checkbox"/> AA batteries</li> <li><input type="checkbox"/> Video cam &amp; charger</li> </ul>
--	--

You can make your own customized gear checklist for photo trips.

## III. Landscape Elements

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There is no such thing as a formula for perfect landscape photography, because individual tastes vary and there are so many variables to every location. But you can increase your odds for success by paying attention to the following photographic and compositional elements.

### 1. Lighting is Crucial

It is important to realize that light itself is the most crucial element of all photographs. Always remember that you are not necessarily capturing the scene or the subject itself as much as you are capturing the light that illuminates it. And in the case of landscape photography, light changes constantly. What may look rather harsh or bland in broad daylight often comes alive with vibrant colors at dawn or twilight. Both the quantity and quality of light changes very quickly at those times, so you need to be prepared to capture the images you want before they get away. Another important element is the position of your camera relative to the available light; if you're not happy with what you're seeing through the viewfinder or on the LCD screen, try moving around to look at the same subject from a different angle, especially when the sun is low on the horizon. Any given object can look completely different depending on whether it is lit from the front, back or side.



*Lighting quality changes dramatically at sunrise and sunset. Photos by Adam Jones, Canon Explorer of Light*

### 2. Sharpness is Key

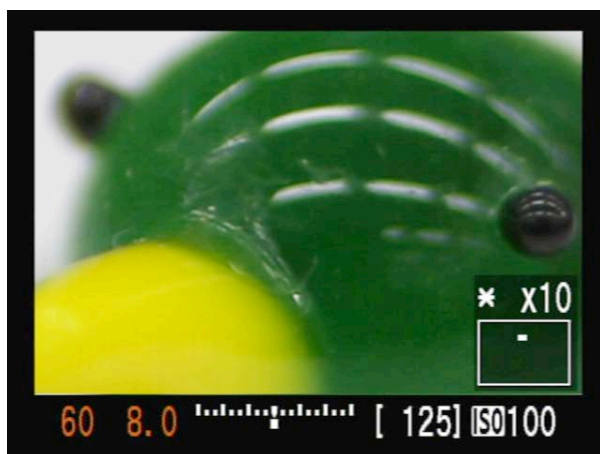
No matter whether it's caused by poor focusing or motion blur, there are few things more detrimental to good landscape photography than a lack of sharpness. You can increase your chances of producing a sharp photo by using the following tools and techniques:

- **Tripod:** Eliminating camera movement is one of the keys to sharp photos, and tripods help you do just that. High-quality modern tripods use lightweight yet sturdy materials such as carbon fiber legs to cut down on weight without compromising stability.



*Carbon fiber reduces the weight of tripods without compromising stability. Photo courtesy of The-Digital-Picture.com.*

- **Critical Focus/Depth of Field:** Check your focus and depth of field carefully before you shoot. This is much easier to do with current EOS models than ever before, thanks to Live View. Especially convenient when working from a tripod, Live View lets you check focus at 5x and 10x magnification anywhere in the picture area. You can also check depth of field without darkening the image by using Live View's Exposure Simulation function. Last but not least, Live View can eliminate both mirror and shutter-induced vibrations through its Silent Shooting functions. For more information on Silent Shooting, please refer to the EOS Immersion Class Download on EOS Creative Essentials.



*Live View's 10x magnification feature is extremely useful for checking critical focus anywhere in the picture area when working from a tripod.*

- **Low ISO:** Canon continually improves the image quality of EOS Digital SLRs each time a new generation of cameras is introduced. For many photographers who started out with film, it has been amazing to see how great digital image quality can be, even at ISO settings of 400 and higher. Nevertheless, it remains true that the lowest noise levels occur at relatively low ISO speeds. Since landscape photography typically involves stationary subjects shot from a tripod, there's really nothing to prevent the use of low ISO speeds in the 50 to 400 range to achieve maximum image quality.



*The use of low ISO speeds maximizes image quality by minimizing noise levels. Photo by Adam Jones, Canon Explorer of Light*

- **Shutter Speed/IS Lenses:** In situations where tripod use is inconvenient or forbidden, another way to cut down on motion blur is through use of high shutter speeds and/or IS (Image Stabilizer) lenses. IS lenses can provide up to 4 full shutter speed steps of shake correction, but unfortunately they have no effect on *subject* movement. High shutter speeds are essential for those situations.



*Canon's optical image stabilization is particularly valuable when using telephoto lenses without a tripod. Photos by Rudy Winston, Canon USA.*

- **Self-Timers/Remote Shutter Release:** If you've gone to the trouble of setting up a tripod, it doesn't make sense to jar the camera by pressing the camera's shutter button with your finger. The ideal accessory to prevent hand-induced vibration is a remote shutter release cable, like the RS-60E3 for Rebel series cameras and the EOS 60D, or the RS-80N3 for most EOS bodies above the Rebel series. An even better way to go with N3-compatible EOS cameras is to use the TC-80N3 Timer Remote Controller, which adds the ability to create time-lapse sequences. If you don't have a remote cable on hand, the next best thing to release the shutter safely when working from a tripod is the camera's self-timer. You can choose a 2- or 10-second delay, and the reflex mirror will lock during the countdown for even greater stability.



*The TC80-N3 Timer Remote Controller is compatible with most current EOS models above the Rebel series, excluding the 60D.*



- **Mirror Lock:** Locking the camera's reflex mirror up and out of the way prior to exposure is another good way to cut down on vibration when working from a tripod. All current EOS models provide two forms of mirror lock:



*Locking the camera's reflex mirror before the exposure improves sharpness by minimizing vibration.*

- o **Live View:** This setting provides one-touch mirror lock by default, and it has the added benefit of showing you a preview image on the camera's LCD screen. You can also display a live histogram while adjusting exposure if you wish, and use the 5x/10x magnification functions for critical focusing anywhere in the picture area. Last but not least, Live View can be combined with Silent Shooting when using an EOS 5D Mark II, 7D, 60D or 50D for maximum stability.



*Live View locks the camera's reflex mirror by default, minimizing vibration.*

- o **Custom Function:** This setting gives you mirror lock without Live View, which is more efficient in terms of power consumption. The negative trade-offs compared to Live View are the absence of an image preview function and Silent Shooting, as well as lack of a live histogram and focusing magnification.
- **Minimal Filter Usage:** Anytime you put another piece of glass between your lens and the subject, you run the risk of image quality degradation. This can occur when the filter is not perfectly parallel to the focal plane, or if it becomes dirty or scratched. This is not to say that lens filters are always detrimental. They may in fact be your best bet to protect a lens when it is exposed to hostile elements such as sea spray, exhaust fumes, or extremely dusty environments. Also, some lens filters are positively beneficial for certain types of photography, such as circular polarizers to reduce reflections or neutral density filters to allow use of moderate apertures when recording HD Video.



*Lens filters can be extremely useful under many shooting conditions, but they aren't always necessary.*

- **Canon L-Series Lenses:** Ultimately, once you've handled all the other requirements for sharp images, you still need to use the best possible lenses to get the best possible image quality. Canon's L-series Lenses help you do that, with a wide selection of focal lengths ranging from 14mm to 800mm to cover virtually every imaging need. There are more than two dozen L-series lenses in the EOS system.



*Canon L-series lenses combine exceptional image quality with excellent build quality.*

### 3. Seasonal Changes

In addition to changes in the quality of light throughout the day, there are many other significant changes to the appearance of a given landscape according to season. If you live in a temperate climate and have the opportunity to photograph the same composition several times throughout the year, you can create an entire series of images, each with their own unique look and feel.

Even when you're photographing a variety of landscape scenes and subjects, it makes sense to use seasonal characteristics to your advantage. Whether it's snow in the Winter, budding trees and flowers in Spring, verdant greenery in Summer, or the constantly changing colors of Fall foliage, there are always many natural seasonal themes to explore and accentuate in your photos.



*There are interesting themes to explore in every season for landscape photography.*

### 4. Grand Vistas

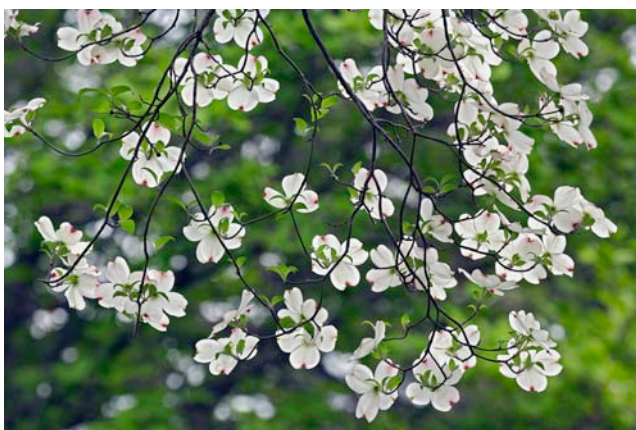
There are many types of landscape photographs, but one of the most popular varieties is the grand vista, depicting a broad expanse of interesting scenery. If you want to create a memorable photo of this type, it pays to compose your images carefully. An interesting and detailed main subject in the distance is just the beginning. You also need to place interesting elements in both the foreground and the background of the scene. Maybe you'll show some pastel-shaded wildflowers in the foreground, an interesting mountain range as the main subject, and a dramatic cloud formation in the sky as your background. Don't forget to use the "sweet light" of dawn and dusk to bring out warm colors and create intriguing patterns of shadow and light. Last but not least, use the Rule of Thirds when appropriate to draw your viewer's attention to the most visually compelling elements in your composition.



*High-quality landscape photography requires interesting subject matter, powerful composition, and great lighting. Canon Explorer of Light Darrell Gulin provides an excellent example here.*

## 5. Intimate Details

If you're lucky enough to find an attractive landscape scene to photograph as a grand vista, chances are good that you can extract even more high quality photos by concentrating on individual elements of the same scene. Perhaps you'll start out with a wide shot of a waterfall using a slow shutter speed to blur the motion of the water, then zoom in and show the detail on the mossy rocks near the water. Or you may find freshly fallen snow providing a clean accent to brilliantly colored tree leaves. Whereas a wide-angle lens is often the best choice for a grand vista, telephoto and macro lenses are better suited for capturing intimate details and isolating them from a distracting background. In the EOS system, the EF 100-400mm f/4.5-5.6L IS USM telephoto zoom lens is a particularly good choice for this type of photography because of its broad range of focal lengths and relatively small size for good portability. Even lighter is the relatively new EF 70-300mm f/4.5-5.6L IS lens.



*Canon Explorer of Light Adam Jones used an EF 100-400mm f/4.5-5.6L IS USM telephoto zoom lens to isolate these blossoms against a pleasing background.*

## IV. Travel Elements

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Travel photography presents a distinct set of visual challenges for high-quality photography. In this section, we will analyze some of the key elements you should be considering before you head out from your hotel or cruise ship.

### 1. Depict a Sense of Place

What is it about a particular location that makes it unique? If you're in an urban environment, it may very well be certain well-known architectural landmarks or neighborhoods. If you're in the mountains, it may be a bald eagle swooping down from the sky to snatch a small animal and carry it away for a late afternoon snack. Or if you're near the ocean, it might be a school of dolphins leaping in and out of the water as they follow each other on a playful mission to who knows where. If you want to end up with a memorable set of travel photos, it's a good idea to research the characteristics of the places you'll be visiting so that you can be ready to snap the shutter when the opportunities present themselves.



*Professional photographer Ron Berard used an EF-S 10-22mm f/3.5-4.5 USM wide-angle zoom to capture a compelling view of the Empire State Building in New York City.*

### 2. Minimize “Cliché” Photos; Find the Unfamiliar

The more popular a given location is, the more challenging it becomes to create a photo that hasn't been done before by someone else. At the same time, what's familiar to other people may be totally new to you. If you really enjoy photography, chances are good that discovering new things to shoot is a big part of your enjoyment. And a good Digital SLR like your EOS camera makes it easy for you to experiment with a variety of angles,

distances, and exposure settings to find the compositions that are most compelling to you. Seeing your results instantly on the camera's LCD can often provide the visual feedback you need when you need it so that you can continue to shoot until you get the photo that you originally saw in your mind's eye. Don't be afraid to overshoot a given location; memory cards are cheaper than ever, and you can always reuse them after you download the photos you like and toss out the clunkers. Ultimately, unless you have a specific assignment from a paying customer, try to find the shots that please you the most. If you can achieve that, you've won.



*Aerial photography is a great way to create an unusual perspective of a common subject such as colorful flowers. Photo by Adam Jones/Canon Explorer of Light.*

### **3. Local People and Daily Life**

In the world of travel photography, images of local people and their daily lives are often the most interesting photos you can get. Ethnic clothing and hair styles can be fascinating, and the variety of faces and facial expressions never ends. The photos can get even more interesting when they depict people enjoying their activities, whether it's for work or leisure.

As long as you're not planning to use your photos for marketing or advertising purposes, you shouldn't need to obtain a model release. And if you are on public property, you usually don't need permission to take photographs of anything or anyone. However, it is always wise to check in advance to make sure that you are observing all local regulations concerning permission for photography. And, if you're planning to take several photographs of a specific individual or group of people, it's usually a good idea to establish some sort of friendly rapport with them ahead of time, even when there's a language barrier. Sometimes, all it takes is eye contact and a friendly smile to get some

communication started. If the person you are photographing is selling something inexpensive, you might want to consider purchasing it. It can also be a good idea to let the person view one of the photos you've taken, using your camera's LCD screen as a display.



*Visiting a foreign country can often provide excellent opportunities for interesting photos of local people. Photo by Jeff Greene for Canon USA.*

#### 4. Unique Cultural Features

Before you arrive in a new country or city, it's a good idea to research any unique cultural features for that location. You can do this online through the web sites we identified in **Section II: Trip Preparation**, and most of the time you can also check out travel guides from popular publishers such as Fodor's, Frommer, and Lonely Planet Guides. These resources will inform you not only where to shoot, but also what to look for.



*Unique cultural features may include items such as statues, sculptures, or other forms of artwork that are indigenous to the area you are visiting. Photo by Jeff Greene for Canon USA.*

#### 5. Details: Signs, Food, Currency

When taking travel photos in populated areas, it's helpful to think in terms of creating a visual story for your viewers. Naturally, you'll want to show them compelling images of people and places, but to add dimension to the story, it's a good idea to include detail shots of interesting items such as signs, food and currency that represent the location. When it's time to produce your photo album or web gallery, you'll be glad you have these images to work with.





*Detail shots like these can provide depth and interest to travel photography. Photos by Jeff Greene for Canon USA.*

## V. Exposure Challenges

It should go without saying that accurate exposure is crucial for high-quality landscape and travel photography, but actually that's just the beginning of your concerns when it comes to choosing image quality and exposure settings. In addition to exposure accuracy, it's also important to select image quality modes, apertures, shutter speeds and ISO speeds carefully to achieve the creative effects that will make your images stand out. In this section of EOS Immersion Class Notes, we will examine each aspect of exposure control for its impact on the quality and style of your photography.

### 1. Getting it Right in the Camera

When you ask a group of professional photographers to describe their workflow, chances are good that each individual will have something unique to share. But at the same time, most pros will tell you that they would rather be spending most of their time capturing images than trying to correct exposure errors during post-processing. After all, a professional photographer gets paid for results, not for the amount of time or skill it takes to massage an image in the computer. There are many ways to capture a series of images, but the more accurate your exposure is in the camera, the easier it will be to create a high-quality final product.

### 2. RAW vs. JPEG

One of the very first creative decisions you need to consider before you set out to capture images is the camera's image quality recording mode, i.e., RAW vs. JPEG. There are legitimate pros and cons to both settings, as shown in the following table:

Image Data Recording Format	Pros	Cons
RAW	Best image quality; exposure, white balance, & bit depth can be modified	Large file sizes, post-processing is required
M-RAW & S-RAW	Retains image-editing benefits of RAW data with smaller file sizes	Reduced resolution, post-processing is required
JPEG	Relatively small file sizes, post-processing is optional	Lossy compression degrades image quality. Bit depth is limited to 8 bits per channel

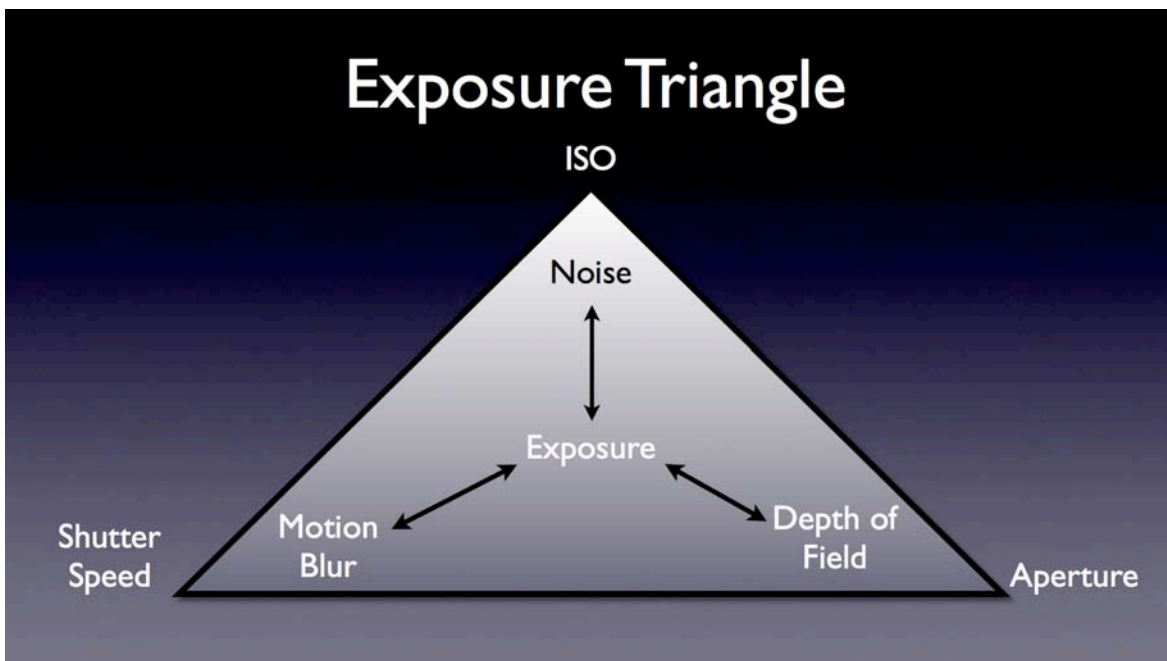
If your top priority is speed and simplicity, a JPEG workflow is ideal. It requires very careful consideration of multiple camera settings including white balance, color space, Picture Style, etc., because all of these settings and more will be "baked in" to the image file. Exposure accuracy in the camera is also critical with JPEGs; blown highlights result in unrecoverable loss of detail, while underexposed shadow detail becomes very noisy when it is brightened during post-processing. But if you get everything right, a high-quality JPEG is perfectly adequate for most photographic applications in terms of image quality. A well-done JPEG requires little if any additional tweaks during post-processing

to generate a high-quality print or web display, and the relatively small size of a JPEG compared to a RAW file results in more images on the camera's memory card, which can be very convenient.

On the other hand, RAW files retain the maximum level of image quality your camera can produce. There are more options for bit depth and color space than with JPEGs, resulting in potentially better tonal gradation and color reproduction accuracy. In addition, RAW files contain more image data for highlight and shadow detail than JPEGs, thereby providing a limited amount of "insurance" against exposure errors. RAW files are generally larger in size than JPEGs, meaning less images on the camera's memory card or your computer's hard drive. They also require post-processing to create a viewable or printable image, but for many serious photographers, the extra work involved with RAW files is worth it in terms of the final results.

### 3. The "Exposure Triangle"

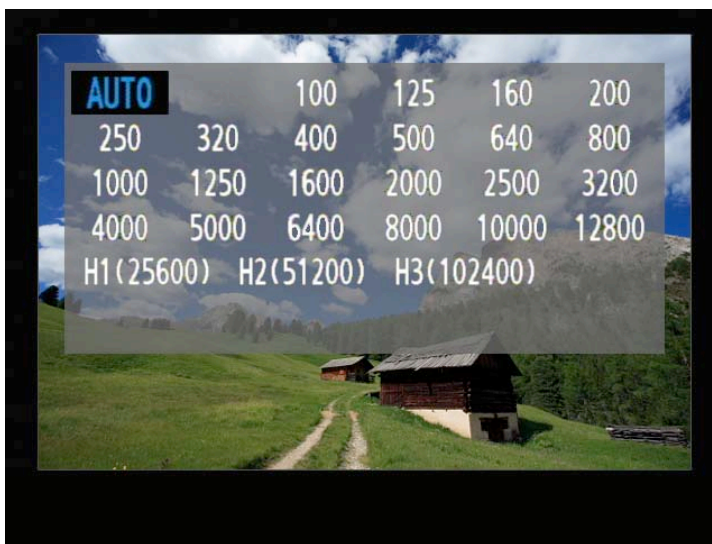
We've all heard of the "Bermuda Triangle," an area where aircraft, boats and ships mysteriously disappear, never to be heard from again. Fortunately, the "Exposure Triangle" has nothing to do with that. Instead, it's a way of describing the three camera settings that affect exposure accuracy, i.e., ISO speeds, apertures, and shutter speeds. For any given light level, a change in one of these settings requires a corresponding change in one or both of the other settings to maintain an equal exposure level. The following section examines the creative reasons for changing these settings according to lighting conditions and the photographer's creative intent.



*Shutter speed, Aperture, and ISO are the three camera settings that affect exposure accuracy. For any given light level, a change in one of these settings requires a corresponding change in one or both of the other settings to maintain an equal exposure level.*

- **ISO Selection**

With a digital camera, ISO speed refers to the sensitivity of the image sensor. The higher the ISO number, the greater the sensitivity. ISO speeds are based on a linear scale, which means that each time the speed value is doubled, so is the sensitivity, and vice versa. An ISO of 1600 is twice as sensitive as ISO 800, for example. Very generally speaking, low ISO speeds from approximately 100 to 400 are easiest to use in relatively bright shooting conditions. ISO speeds above 400 are typically more convenient in low light situations. The main image quality trade-off for higher ISO speeds is digital noise, sometimes similar in appearance to film grain. As image sensor and processing technology improves, high ISO image quality gets better and better, but it is still true that maximum image quality is achieved at low ISO speed settings.



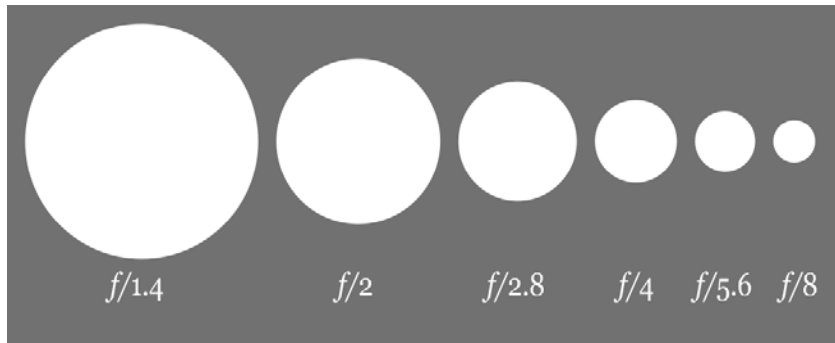
*The EOS-1D Mark IV has the most extensive ISO range of any EOS Digital SLR announced to date, as of September 2010.*

- **Aperture Selection**

The technical definition of an aperture value in photography is the ratio between the diameter of the lens opening versus the focal length of the lens, expressed as an f/stop or f-number. The smaller the f-number, the larger the aperture and vice versa. At any given focal length, the larger the aperture, the greater the volume of light that reaches the image sensor in a digital camera. Aperture values are logarithmic rather than linear, so the numbers line up differently than ISO speeds. For instance, an aperture value of f/2 lets in four times as much light as f/4, or twice as much light as f/2.8.

Besides light transmission, aperture size is also one of the factors along with focal length, subject distance, image size and viewing distance that controls depth of field. Large apertures reduce depth of field, while small apertures increase it when all else is equal. With most modern digital SLRs including the EOS series, aperture size also has an influence on image clarity in the respect that maximum sharpness is typically

achieved at approximately 1 to 3 f/stops smaller than the maximum aperture of the lens. Sharpness is somewhat degraded at smaller apertures due to diffraction, and sharpness is sometimes degraded at larger apertures due to optical issues such as spherical or chromatic aberrations. Bottom line, there are a number of factors to take into consideration when selecting an aperture or f/stop, but whatever setting you end up using has a direct effect on exposure levels.



*Aperture diagram courtesy of Wikipedia.*

- **Shutter Speed Selection**

As the third element in the Exposure Triangle, shutter speed refers to the length of time that the image sensor in a digital camera is exposed to light. Longer shutter speeds result in higher exposure levels and vice versa. Like ISO speeds, shutter speeds are based on a linear scale. Therefore, a shutter speed of  $1/125^{\text{th}}$  of a second lets in twice as much light as  $1/250^{\text{th}}$  of a second, or approximately half as much light as  $1/60^{\text{th}}$  of a second, for instance. From a practical standpoint, photographers often select shutter speeds based on the desire to control or eliminate motion blur in the image, whether it is caused by camera movement, subject movement or both. For example, the general rule of thumb for minimizing motion blur caused by camera movement during handheld photography is to use a shutter speed equal to or faster than  $1/\text{focal length}$  of the lens. In the case of a 200mm lens, that would be approximately  $1/250^{\text{th}}$  of a second. Similarly, high shutter speeds are used to freeze the motion of a fast-moving subject. For instance, it may be necessary to use a shutter speed of  $1/1000^{\text{th}}$  of a second or faster to freeze the motion of a jet airplane passing overhead at an air show. The trade-off for fast shutter speeds is the need to use a larger aperture, a higher ISO speed, or sometimes a combination of changes in both settings to achieve an equivalent exposure level.

Generally speaking, landscape and travel photography often involve stationary or slow-moving subjects. This gives photographers the luxury of using relatively slow shutter speeds, which in turn allows the use of low ISO speeds to reduce noise, and/or smaller apertures to increase depth of field.



*Landscape scenes often involve stationary subjects shot from a tripod or with an Image Stabilizer lens, which give photographers the luxury of using slow shutter speeds. This in turn allows the use of lower ISO speeds for better image quality. Photo by Canon Explorer of Light Adam Jones*

#### **4. Auto Exposure Bracketting (AEB)**

All EOS Digital and 35mm SLRs have a feature called Auto Exposure Bracketting that creates a series of images taken at different exposure levels. Most current EOS cameras capture 3 images per AEB sequence, up to +/- 2 or 3 stops apart in 1/3 or 1/2 stop increments, but EOS-1D/1Ds series cameras and the EOS 5D Mark III can capture up to 7 images per AEB sequence, up to +/- 3 stops apart in 1/3 or 1/2 stop increments.

AEB can be combined with exposure compensation in auto exposure modes such as Program, Shutter-Priority and Aperture-Priority in order to control the starting point of the AEB sequence. Additionally, AEB can be set to continue indefinitely until cancelled by the photographer, or it can be set to cancel automatically after 1 sequence. Finally, Canon EOS models above the Rebel series (EOS 60D, EOS 7D, etc.) provide an additional AEB custom function that allows the photographer to change the order of exposures from normal/under/over to under/normal/over — when this is active, bracketed sequences viewed in a browser will show a continuous and consistent exposure difference. On the other hand, the standard method (beginning with the “normal” exposure) gives users the most likely chance of getting proper exposure in scenes where specific shutter timing may come into play, such as candid photos of people.

## AUTO EXPOSURE BRACKETING



### Auto Exposure Bracketing (AEB)

Most EOS cameras capture 3 images per AEB sequence, up to +/- 2 stops apart

The EOS-1Ds Mark III and EOS-1D Mark IV can capture up to 7 images per AEB sequence, up to +/- 3 stops apart.

### 5. High Dynamic Range Image (HDR)

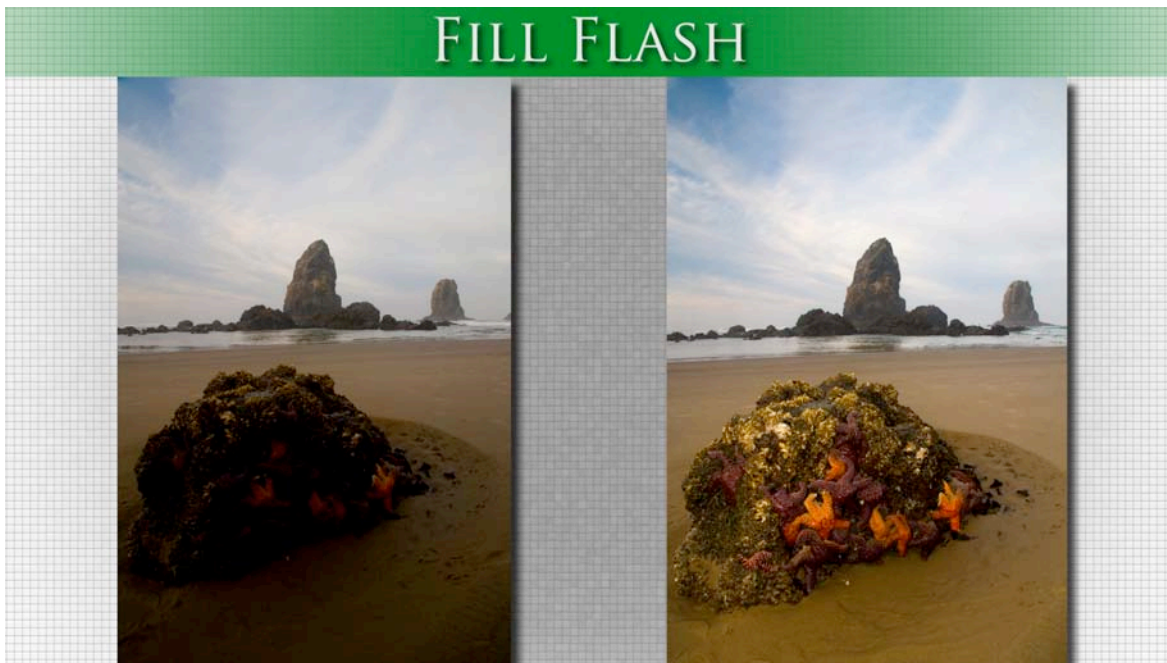
HDR imaging has grown in popularity in recent years. It involves taking two or more images, taken at different exposure levels, and combining them using special software into a finished image that has a broader range of detail in bright highlights and dark shadow areas. Software such as Photomatix Pro™ by HDRSoft or Adobe Photoshop™ are often used for HDR imaging. However, Canon's EOS 5D Mark III camera has a built-in HDR mode, which can be activated at any time. Five different effects options are available, for finished results varying from natural to extremely vivid.



Professional photographer Ron Berard has mastered the art of HDR imaging, as shown in this illustration of Manhattan's City Hall

## 6. Fill Flash

Fill Flash is another technique that can be very effective for landscape photography when you need to illuminate a shaded foreground subject for better balance with a brightly lit background. The EOS Speedlite System is designed to provide balanced fill flash exposure automatically whenever the camera is set to an Auto Exposure mode and the flash is set to E-TTL. Flash Exposure Compensation is also available to provide more control over the level of fill flash for any given scene. For more information on the use of EOS Speedlites, please read the EOS Immersion Seminars 2012 Class Notes on Speedlite System Creativity and Technique.



*Fill flash can be very effective for landscape photography when you need to illuminate a shaded foreground subject for better balance with a brightly lit background. Photos by Canon Explorer of Light Darrell Gulin.*

## 7. Expose to the Right

One of the relatively unknown characteristics of digital imaging is that there is more tonal information in the highlight portions of an image than the shadows. Image quality (for single exposures as opposed to blended HDR images) can sometimes be improved by increasing exposure levels to brighten the shadows. This technique is sometimes called “Expose to the Right,” or ETTR for short. ETTR often results in less shadow noise and better tonal gradation throughout the image. The key to this technique is taking a series of test shots at progressively higher exposure levels and observing the histogram to ensure that highlights remain unclipped. The range of tones shown on the histogram moves towards the right as exposure levels are increased, which is why the technique is called “Expose to the Right.” The extra “headroom” of RAW files makes this technique easier to accomplish, but even with RAW capture, there is a limit to how far the exposure



level can be increased before clipping occurs. This is usually about 1 stop over the standard exposure setting. Be sure to experiment with “ETTR” until you’re comfortable with the results. You may find that you’ll need to make tonal adjustments during post-processing to achieve the best possible image quality, but for some images, the extra effort can really pay off.



*In this example, exposing to the right resulted in better shadow detail without clipping the highlights. Photos by Rudy Winston/Canon USA.*

## VI. Creative Challenges

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### 1. Composition

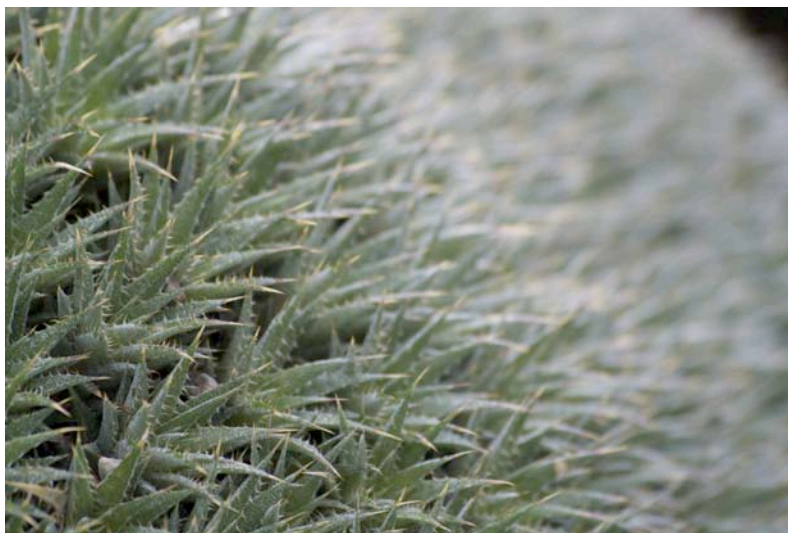
Once you're pleased with the accuracy of your exposures, you can further improve the quality of your landscape and travel photography by addressing creative challenges such as composition, panoramas, close-up photography, and polarizing filters. This section analyzes each of these topics in greater detail.

#### Composition

Good composition is a requirement for all types of high-quality photos, but it is especially important for landscape and travel photography. There are several common mistakes to avoid, but the good news is that the more you shoot, the easier it will become to spot problems in advance and fix them before they ruin your shots.

- **Isolate the Subject**

Extreme depth of field, where everything in the shot from near to far is sharp, can sometimes be a good thing. That's certainly the case when you're photographing grand vistas during landscape photography, as we've previously discussed. However, when you're photographing people, animals, or small objects, you can improve the quality of your composition by blurring the background. One way of doing this is to use a telephoto lens and zoom in. Another way is to move close to the subject and use a relatively large aperture setting.



*In this example, Canon USA photographer Rudy Winston moved in close and used a relatively large aperture to help isolate the subject against a softly blurred background.*

- **Provide a Sense of Scale**

Sometimes, it's difficult for the viewer to accurately judge the size of the subject in landscape photography. This can occur, for example, when photographing a waterfall at close range. You can improve the quality of many if not most landscape photos by including a person, animal or other recognizable subject in the foreground. These

“supporting” subjects provide a sense of scale, and can often accentuate the size of the main subject.



*Placing a human figure in a landscape photo often provides a badly needed sense of scale. Photos by Jeff Greene for Canon USA.*

- **The Rule of Thirds, and When to Break It**

With most cameras, it’s all too easy to fall into the bad habit of “bullseye” composition, with your subject positioned in the dead center of the frame and a lot of wasted space all around it. The quality of your photographs will often improve by changing the composition so that the main subject is placed off-center. One way of doing this is to use the Rule of Thirds, which involves dividing the frame into thirds both horizontally and vertically, like a tic-tac-toe game. Find the spots where the lines intersect and place your main subject or horizon line there. All current EOS models have a 3 x 3 grid option in Live View that makes it easy to compose your shot according to the Rule of Thirds. But don’t be afraid to break the rule when the situation calls for it. This can often be the case with portraiture and sports photography.

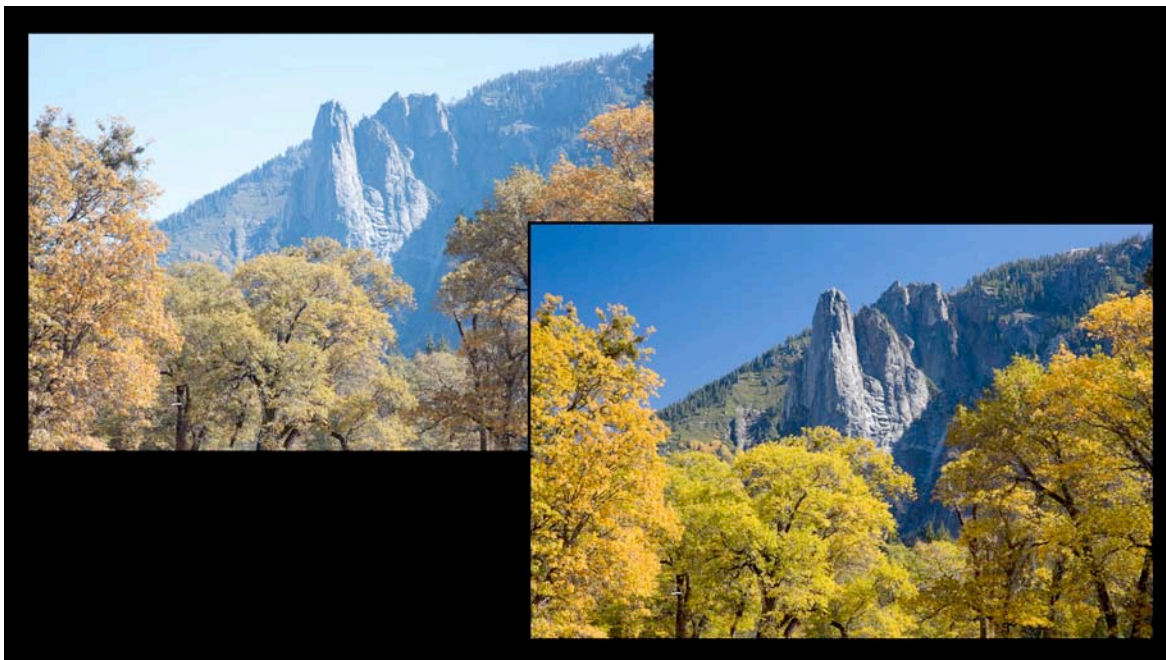


*Adam Jones used the Rule of Thirds to place the penguin in the best position to make this composition more interesting*

## 2. Polarizing Filters

The White Balance function of modern cameras such as EOS Digital SLRs has largely done away with the need for color compensation filters, and it’s even possible to emulate

the effect of Red, Orange, Yellow and Green filters for black-and-white images when using your EOS camera's Monochrome Picture Style. But one optical filter whose effects cannot be duplicated any other way is a polarizer. These filters are extremely useful for landscape photography. They can enhance colors and contrast, and reduce or eliminate unwanted reflections and atmospheric haze. They are superb for photos involving foliage, water and sky.



*In this example, Jeff Greene used a polarizing filter to darken the sky, bring out the foliage, and reduce the effects of atmospheric haze.*

There are essentially two types of polarizing filters on the market: Linear and Circular. This does not refer to their shape, but rather to the style of their polarization. To make a long story short, be sure to use a Circular Polarizer if you're using an EOS Digital or any other autofocus SLR camera. The older and cheaper linear polarizers can sometimes cause autofocusing errors as well as incorrect exposure settings with these cameras. A few other tips:

- Avoid the use of polarizers on ultra-wide angle lenses, or else you may end up with a band of darkness surrounded by lighter areas in the scene.
- Some circular polarizers are unthreaded on the front side. This makes them incompatible with standard Canon lens caps. Workarounds include slip-on lens caps, but it's much more convenient to purchase a circular polarizing filter that has front threads. Canon's PL-C B filters are examples of front-threaded circular polarizers.

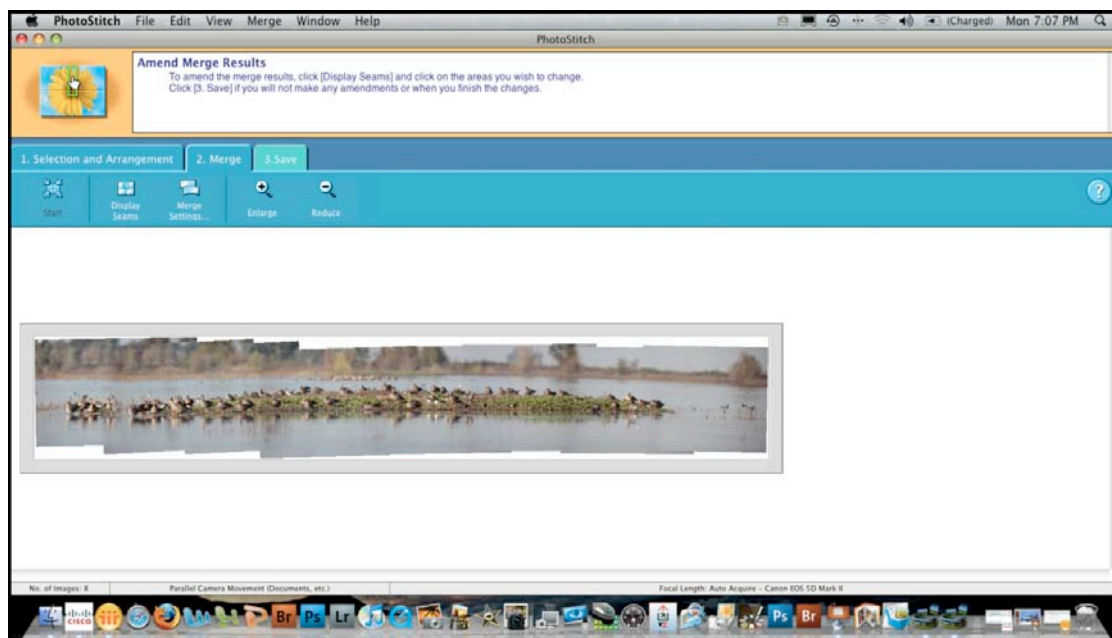
- Consider buying the largest circular polarizer you need according to the filter sizes of your lenses, then use step-down rings to adapt the filter to your other lenses. This is more economical than buying circular polarizers for every filter size you need.

### 3. Panoramas

Panoramic photos are essentially composites of multiple images that produce an all-inclusive, unique point of view that is either wider or taller than any single image your camera can produce. Panoramas are very popular for landscape photography. They work best on subjects that have a distinct beginning and end, such as bridges or buildings. Vertical panoramas are great for tall objects that can't normally be seen as clearly in a single snapshot.

The requirements for panoramic photography include:

- **A level tripod and camera:** If either the camera or the tripod is not level, the images that make up the panorama won't line up properly. If you have an EOS 7D, you can use the camera's built in dual-axis electronic level to help solve this problem. Otherwise, use a bubble level and check both pitch and roll.
- **Manual exposure settings:** This is especially important for panoramas because it is difficult if not impossible to combine images with different exposure levels. If you think of the end result as a single image, it's easy to see why you want all components of that image to have the same exposure, and manual exposure settings are the way to ensure that.
- **Manual focus:** Similarly, manual focus is better than autofocus for panoramas. If the focus shifts between images, you may find that it becomes more difficult to combine them.
- **Manual white balance:** Same story here, manual white balance eliminates unwanted variations in color from shot to shot.
- **A series of identically exposed, overlapping images:** When capturing individual images for use in panoramas, ensure that there is sufficient overlap from one shot to the next. To be on the safe side, one third of each new image should overlap the previous one.
- **PhotoStitch or other software:** Once the overlapping images have been downloaded to your computer, PhotoStitch software makes it easy to create a panorama. It composites them automatically and then crops the edges to produce a final image that can be saved in any of several recording formats including TIFF, JPEG and QuickTime VR. PhotoStitch is supplied with all EOS Digital SLRs at no extra charge. It is available for Mac and Windows operating systems.



*Canon's PhotoStitch software makes panorama photography easy."*

Last but not least, consider the fact that panoramic photography effectively increases the resolution of your images. For example, a simple 3-image panorama shot at full resolution with the EOS 5D Mark III or EOS 5D Mark II could have resolution equivalent to approximately 60 megapixels instead of the 21 or 22 megapixels that are available for single exposures. And that's just the beginning; the more images you add to your panorama, the higher the effective resolution will become.



*Professional photographer Jeff Greene created this panorama with a Canon TS-E Tilt-Shift lens.*

## 4. Close-up and Macro Photography

This is a vast topic, but we'll limit the discussion for now to the range of equipment that's available to you for macro and close-up photography in the EOS Digital SLR System.

### Macro Lenses

Canon currently offers 6 dedicated Macro lenses for the EOS System, with focal lengths ranging from 50mm to 180mm. The following chart displays their key specifications.

Lens	Magnification Range (Unassisted)	Working Distance @ 1:1	Compatibility
EF 50mm f/2.5 Compact Macro	Infinity - 0.5X (LSC) 0.25X - 1X	2.75 inches	All EOS Cameras
EF-S 60mm f/2.8 Macro USM	Infinity - 1X	3.5 inches	Rebel series DSLRs, 7D, EOS 20D ~ 60D
MP-E 65mm f/2.8 1X-5X Macro Photo	1X - 5X	4.0 inches	All EOS Cameras
EF 100mm f/2.8L Macro IS USM	Infinity - 1X	5.5 inches	All EOS Cameras
EF 100mm f/2.8 Macro USM	Infinity - 1X	5.9 inches	All EOS Cameras
EF 180mm f/3.5L Macro USM	Infinity - 1X	9.8 inches	All EOS Cameras

All Canon Macro lenses can achieve life-size (1:1) magnification. And some lenses, like the MP-E 65mm f/2.8 Macro Photo lens, can actually help you see details that are too small to see with the naked eye. One of the most important variables between Canon Macro lenses is their Working Distance, in other words the distance from the front of the lens to the subject at 1:1. Longer focal length lenses like the EF 180mm f/3.5L Macro USM have greater working distances that come in handy when attempting to photograph insects or other small animals that may become inaccessible at shorter distances.



*The longer working distance of the EF 180mm f/3.5L Macro USM lens enabled Canon Explorer of Light Darrell Gulin to capture this striking close-up of a butterfly.*

You don't always need a Macro lens to create a close-up photograph. In this example, Canon Explorer of Light Adam Jones used a 500mm telephoto lens with an Extension Tube to get this striking image of a bald eagle. Extension tubes and close-up diopters can be used with a variety of non-Macro lenses to achieve high-quality close-up photos. But true Macro lenses typically provide the best overall sharpness for extreme close-ups.



*Photo by Adam Jones/Canon Explorer of Light*

### Macro Speedlites

Canon offers a pair of special-purpose Speedlites for close-up and macro photography:

- **Macro Ring Lite MR-14EX** is a compact twin-tube ring light flash with modeling lamps and lighting ratio control.
- **Macro Twin Lite MT-24EX** is a versatile macro flash with 2 adjustable and removable flash heads. It also has modeling lamps and ratio control.





## VII. Technical Issues in the Field

Beyond the basic photo techniques we've described so far, there are several other issues worth considering before you venture out on a landscape or travel photography assignment. Here is a quick overview of some technical issues that can really make a difference in your workflow approach.

### 1. File Management

Just as it used to be in the film era with negatives and transparencies, there is a strong need in the digital era for a robust way to manage your image files. You need reliable methods to preserve, classify and access your digital images over time. Otherwise, you'll quickly be overwhelmed with the sheer volume of images you've produced, and it's probable that you'll end up losing valuable photos forever unless you can come up with a reasonable plan for file management.



*A good file management system is essential for serious photographers. Photo by Jeff Greene for Canon USA.*

One of the best resources available on this topic is “The DAM Book: Digital Asset Management for Photographers” by Peter Krogh, published by O’Reilly.

A Digital Photography Ecosystem  
Process > Edit > Archive

Second Edition

# The **DAM** Book

Digital Asset Management for Photographers



**O'REILLY**

Peter Krogh

*Courtesy of O'Reilly Publishing*

### **Memory Cards**

CF (CompactFlash) and SD (Secure Digital) memory cards can store ever-increasing amounts of data. They are incredibly small and lightweight, which is a good thing when it comes to using them in your EOS Digital SLR. But some of them are expensive, and the fact that they are so physically small makes them easy to misplace or lose. Many successful pros and advanced amateur photographers have discovered that the safest way to protect valuable memory cards is to store them in a card wallet when they are not in use.



*Card Wallets are useful for storing valuable memory cards when they are not in use.*

### **Laptop Computer**

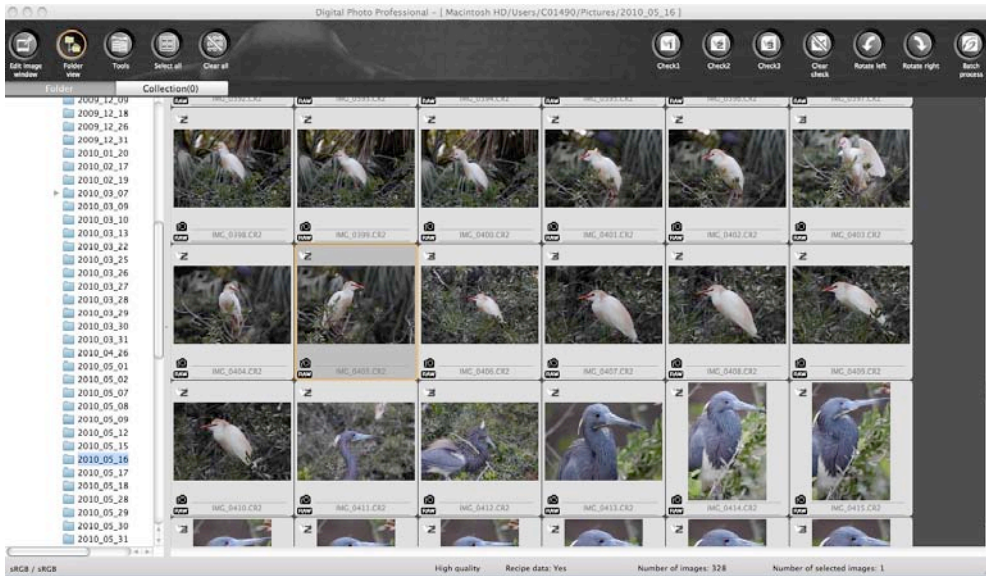
Laptop computers today are powerful enough to display, edit and store copies of your precious digital images once they've been captured in the field. They're also small enough to carry on an airplane and convenient to use in a hotel. A good laptop computer is your first line of defense for downloading copies of your digital image files and storing them in a file management system.

### **File Management Software**

There are many excellent software applications available today for managing digital images. Here are some of the most popular titles:

- Canon EOS Utility and Digital Photo Professional
- Adobe Photoshop Lightroom
- Apple Aperture
- Apple iPhoto
- Microsoft Windows Photo Gallery
- PhaseOne Expressions Media
- PhotoMechanic by CameraBits

Each of these programs has its own strengths and weaknesses, but all of them are capable of managing thousands of images, even when they are spread out on a local area network or remote server.



Canon's DPP (Digital Photo Professional) provides basic file management tools along with powerful image editing capabilities.

### Portable External Hard Drive

Modern laptop computers tend to have spacious built-in hard drives, but they can fill up very quickly when you start storing high-resolution digital images, especially RAW files. If you are a serious photographer, you will eventually need to transfer images from your laptop to an external hard drive in order to clear up space. Fortunately, the price of external storage has dropped considerably in the past couple of years, to the point where you can purchase terabyte drives for less than \$200. These drives are smaller than a paperback book and easy to carry in your computer bag, so it's a good idea to invest in a few of them for use on the road.



Photo courtesy of Western Digital

### **DVDs**

As useful and economical as hard drives can be, they are also relatively fragile and easy to damage or destroy. For this reason, some photographers find it practical to store additional copies of their favorite or most important images on DVDs. Even though the storage capacity of a standard DVD is limited to 4.7GB, that's still enough to store a reasonable amount of image files. Many modern laptop computers have built-in DVD burners, and blank DVDs are very inexpensive. It's best to think of them as cheap insurance for your valuable memories. For convenience when travelling, consider using a DVD "wallet" instead of plastic jewel cases to cut down on bulk.



*DVDs provide an economical way to create backups of your most important digital files.*

### **"Cloud" Storage**

Yet another option that is becoming more popular with landscape and travel photographers is "cloud" storage, in other words uploading digital images to remote servers via FTP or the World Wide Web. Data transfer speeds are often slower with this method, and sometimes the cost of Internet access from a hotel or other remote location can get expensive. But storing at least some of your most important images this way can be a lifesaver in the event that your other forms of data storage are damaged or stolen. Popular web sites for photo storage include Flickr, SmugMug, and PhotoShelter.

<https://www.photoshelter.com/tour/upload-and-organize-photos-and-images>

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- **Photo editing software.** Upload directly from common programs like Photo Mechanic, Aperture or Lightroom.
- **FTP.** Fast and simple. Standard and Pro accounts can use inbound FTP; Pro accounts even allow multiple people to FTP in (retouchers, etc). Our agency clients love this.
- **Send a hard drive.** Tons of files and no time? Send us your drive(s) and we'll upload for you straight from our data center. \$100/drive.

**Aperture** **ADOBE PHOTOSHOP LIGHTROOM** **Photo Mechanic**

Plug-ins are available for the most popular image editing programs like Apple Aperture, Adobe Lightroom, and Photo Mechanic.

**"I upload images to PhotoShelter immediately after finishing a shoot. My clients have instant online access via my website and can start deciding which images to select for their project or articles within minutes of an event ending."**  
— Ed Mulholland, Fightwire Images

**"With PhotoShelter, I get a serious archive that not only allows me to store TIFF and JPEG images, but one that also supports RAW and PSD files. Which means that, in addition to clients and prospective stock buyers being able to access files straight from my website, I can also easily get to my work files, and deliver images to a client's specifications from anywhere in the world."**  
— Darren Carroll, commercial & portrait photographer

**"As a destination wedding photographer, I need access to all my pictures all the time, from just about anywhere in the world. I get a great way to archive and present my images, my brides get to directly download their wedding pictures, and their mothers get to order prints to display around their house."**  
— Eric Hegwer, wedding photographer

*PhotoShelter is designed for photographers who wish to store, view and market their images on the Web.*

## 2. Useful Accessories

### Tripods, Ball Heads, Quick Release Plates, Etc.

As we said earlier, eliminating camera movement is one of the keys to sharp photos, and tripods help you do just that. High-quality modern tripods use lightweight yet sturdy materials such as carbon fiber legs to cut down on weight without compromising stability. Ball Heads are popular for landscape photography because they make it easy to

move a camera or lens quickly and conveniently. Quick release plates fit on the bottom of tripod collars for long telephoto lenses, and they can save valuable time in the field when it's time to change from one lens to another using a tripod head that's equipped with a matching quick release system.

#### **Remote Release Cables, Self-Timers**

If you've gone to the trouble of setting up a tripod, it doesn't make sense to jar the camera by pressing the camera's shutter button with your finger. The ideal accessory to prevent hand-induced vibration is a remote shutter release cable, like the RS-60E3 for Rebel series cameras, or the RS-80N3 for most EOS bodies above the Rebel series. An even better way to go with N3-compatible EOS cameras is to use the TC-80N3 Timer Remote Controller, which adds the ability to create time-lapse sequences. If you don't have a remote cable on hand, the next best thing to release the shutter safely when working from a tripod is the camera's self-timer. You can choose a 2- or 10-second delay, and the reflex mirror will lock during the countdown for even greater stability.

#### **Image Stabilizer Lenses**

In situations where tripod use is inconvenient or forbidden, IS (Image Stabilizer) lenses can provide up to 4 full shutter speed steps of shake correction. Canon currently offers more than 25 IS lenses in the EF/EF-S line-up.

#### **Flash Equipment**

Canon Speedlites are tremendously useful for adding light to dark scenes and improving the quality of light that reaches the subject. But they can also effectively eliminate motion blur caused by camera or subject movement. There are currently five EX-Series Speedlites to fit the needs of EOS System photographers. For more detailed information on the usage of EOS Speedlites, be sure to read the 2012 Canon Live Learning EOS Immersion Seminars Class Notes document on "**EOS Speedlite System Creativity and Technique.**"

## VIII. Ten Quick Tips

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### 1. Skip Breakfast and Dinner

As we've mentioned before in the Landscape Elements section, good lighting is a key to successful landscape and travel photography. This often means arranging your schedule so that you can be available to shoot at dawn, dusk or both in order to catch the "sweet light" that only occurs at those times. The bad news is that you might end up needing to skip, or at least rearrange, your normal breakfast and dinner schedules to accommodate the unforgiving timing of early morning or late afternoon light, but the good news is that your landscape and travel photos will look more professional and pleasing than shots of the same location shot in harsh daylight.



*This might have been just an average composition under most other lighting conditions, but the position of the sun really helped to create strong colors and a strong point of interest. Photo by Adam Jones, Canon Explorer of Light.*

### 2. No Tripod? No Problem...

A good, sturdy tripod can be immensely helpful in improving the quality of your landscape photos, but let's face it: There are going to be times when tripod usage is inconvenient, impractical or forbidden for various reasons. Under these circumstances, it's important to have a viable backup plan. Sometimes, you can get by with an Image Stabilizer lens or the combination of a fast shutter speed and a high ISO speed setting. Other times, you might be able to brace yourself against a wall or place your camera on a table or ledge for stabilization. Occasionally, you may even be able to steady your camera on the finial of a table or floor lamp, because the bushing on many of these finials



happens to be the same size (1/4" x 20) as the camera's tripod socket! Where there's a will, there's a way.....:-)



*This technique works best with lightweight cameras and lenses. Photo by Jeff Greene for Canon USA.*

### 3. Label Your Memory Cards

Memory cards may hold multiple gigabytes worth of precious digital images, but the cards themselves are relatively tiny and easy to misplace. Although there's no guarantee that you'll ever get a card back if you lose it, you can increase the odds of recovery by labeling your cards with your name and contact information. In the case of SD cards, which are so small that conventional labels are problematic, you could also take a photo of your business card or contact information as the first frame so that anyone viewing the images on the card will see it.

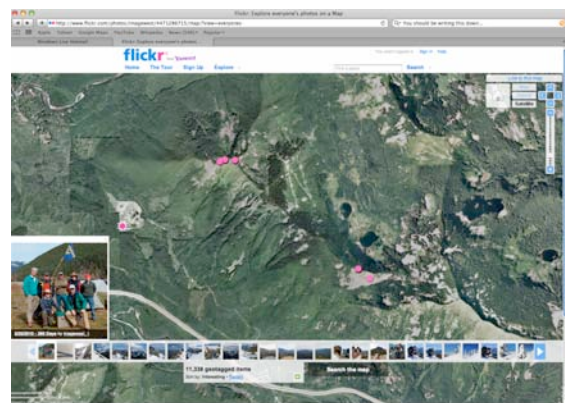
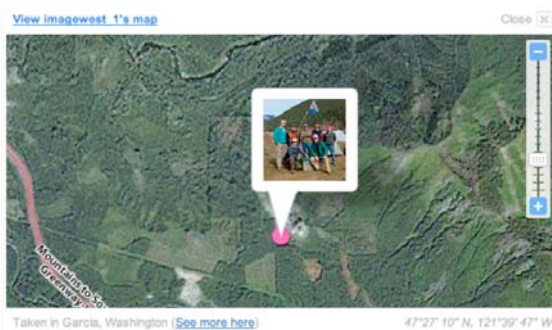


## 4. Geotag Your Photos

According to Wikipedia:

*“Geotagging adds geographical identification metadata to various media such as photographs and video clips. These data usually consist of latitude and longitude coordinates, though they can also include altitude, bearing, distance, accuracy data, and place names. Geotagging can help users find a wide variety of location-specific information. For instance, one can find images taken near a given location by entering latitude and longitude coordinates into a geotagging-enabled image search engine. Geotagging-enabled information services can also potentially be used to find location-based news, websites, or other resources. Geotagging can tell users the location of the content of a given picture or other media or the point of view, and conversely on some media platforms show media relevant to a given location.”*

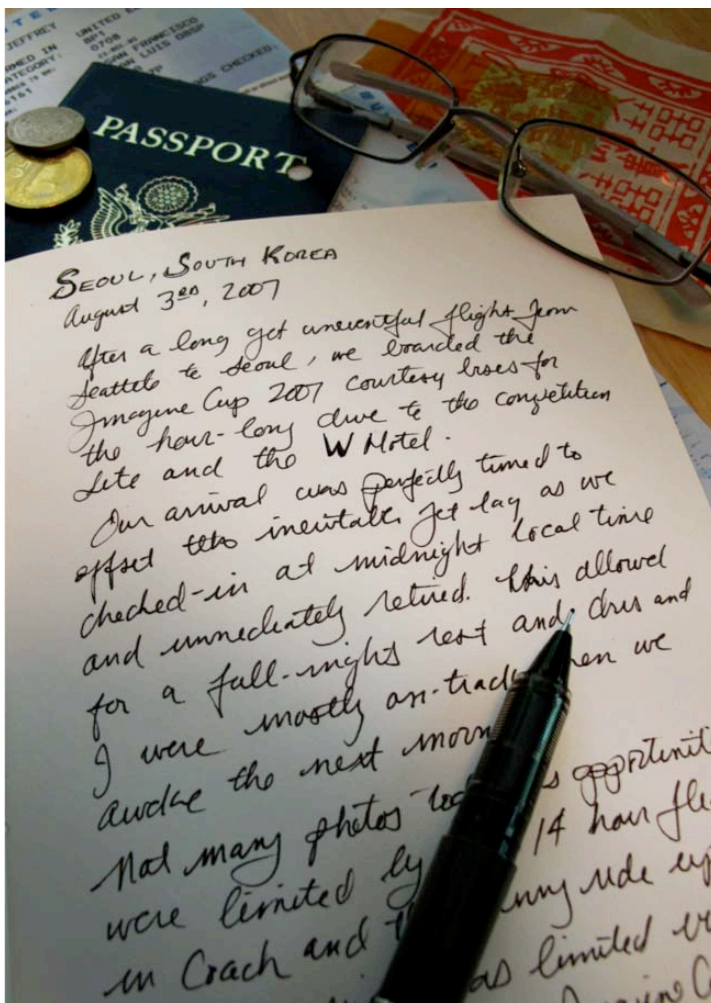
Both Microsoft and Apple are embracing geotagging for digital photos and video in their current operating systems and software, so now is a good time to get started on geotagging your images if you haven't considered it before. There are a number of accessories you can use for this purpose, including GPS loggers like those shown here with dedicated software apps and even select Eye-Fi® SD memory cards with built-in geotagging functionality. Most EOS Digital SLRs above the Rebel series can also interface directly with GPS receivers for real-time geotagging via Canon's optional Wireless File Transmitters. And, Canon's GP-E2 can be used with the EOS Rebel T4i, 7D, and 5D Mark III cameras for in-camera geotagging — as well as continuous logging of the route the user has traveled.



GPS loggers and dedicated software work together with the date/time metadata in your digital image files to geotag your photos.

## 5. Maintain a Travel Log or Journal

At the end of a day on your vacation or photo trip, it's all too easy to forget important details and feelings about your experiences, including various items and elements that the photos alone may not cover. That's why it can be very useful to write down your thoughts in a travel log or journal that you carry wherever you go. If writing isn't your thing, consider using a portable audio recorder for quick and easy voice memos. When you get back from your trip and start organizing your photos, you'll be glad to have these valuable logs or journals to enhance your recollection.

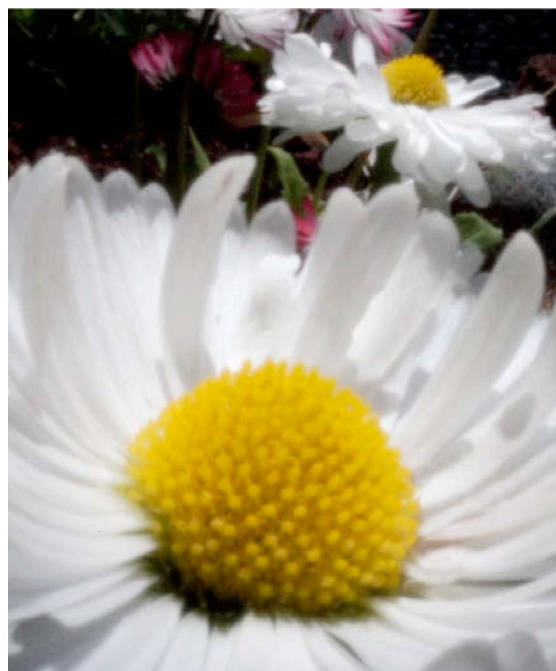


Travel journals are great for recording details about your photos that you might forget otherwise. Photo by Jeff Greene for Canon USA.

## 6. Try Digital Pinhole Photos

If you've ever taken a basic photo course, you may have tried pinhole photography before. But if not, you're in for a treat. It's cheap and it's fun! To get started, find a spare body cap for your EOS Digital SLR and drill a hole in the center of it. Then tape a small piece

of aluminum foil across the hole and poke a small hole in it with a sewing needle or straight pin. Mount the body cap to your camera and you're ready to shoot. Be sure to use a tripod or other method to stabilize the camera, and consider using a remote shutter release or self-timer to avoid jarring the camera during the exposure. Try setting the camera to Program mode at a moderate ISO setting, then check your exposure accuracy with the camera's histogram display. (Don't forget to block the viewfinder eyepiece to ensure an accurate meter reading.) If you need to make an adjustment for underexposure, apply some exposure compensation and try again. Pinhole photography is no substitute for a high-quality EF lens, but it's a fun alternative to explore when you want to try something different.



*Pinhole photography with your EOS Digital SLR is inexpensive, easy and fun.*

## **7. Free Diffuser from the Airlines!**

Flash photo enthusiasts often spend lots of money on expensive aftermarket diffusers for their Speedlites to produce softer light for professional quality images. If your equipment budget is temporarily tapped out, you might want to consider a free alternative: The next time you take an airline flight, find an unused air sickness bag in your seat pocket and take it with you when you leave. These plastic-lined bags are usually translucent and neutral in color. They can be attached to the head of your Speedlite with a rubber band and used as a diffuser. This technique may sound strange, but as the old saying goes, "don't knock it until you've tried it!"



*Flash diffusers don't have to be expensive to be good! Photo by Jeff Greene for Canon USA.*

### **8. Cheap Color Calibration Tool**

Along similar lines of frugality, you don't necessarily have to spend big money on a photographic gray card if all you want to do is come up with a neutral reference target for registering custom white balance settings. Instead, visit your local hardware store or paint supplier and ask for a swatch sheet for their gray paint. These swatches may not be perfectly neutral, but they are often "close enough" to be suitable.



*Paint swatch samples can lead a double life as color calibration tools in the field. Photo by Jeff Greene for Canon USA.*

## 9. Get Photos of Yourself

Many if not most travel photographers get so wrapped up in capturing images on location that they forget to have pictures taken of themselves. Although you may not feel comfortable handing over your expensive EOS Digital SLR to a complete stranger for this purpose, it's usually easier and not so risky to carry along a compact digital point & shoot camera for this purpose. These cameras are fully automatic and most people aren't intimidated by them. When you get home, you'll be glad to have some snapshots of yourself and your family if they are travelling with you.



*Photos of yourself on location are a great way to remember the trip.*

## 10. Take Your Camera Everywhere

If you really enjoy photography, there are many reasons to take a camera with you wherever you go. Here are several points to consider:

- With a camera close at hand, you'll find yourself looking for opportunities to use it. If you start looking at the world that way you'll begin to see it differently and your compositional skills will improve.
- It may sound obvious, but by taking more pictures, you'll improve the odds of making good ones!
- The more you use your camera, the more familiar you'll become with it and what it's capable of. With practice, changing settings becomes second nature and much faster.
- You won't realize just how many opportunities you've missed to capture moments and memories photographically until you start carrying your camera around. Don't forget that images are a wonderful way to help remember stories and celebrate life.

Images are good for the soul – don't miss the opportunity to create them. Take your camera everywhere!



**EOS-1D Mark IV**



**PowerShot G12**

*Large or small, it's your call. Don't forget to take a camera with you wherever you go!*

## **IX. Conclusion**

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We hope that these class notes will act as a useful supplement to the EOS Immersion Seminar on Landscape and Travel Photography that you have recently attended. Our objective has been to provide more depth on each of the topics that were covered during the live presentation, because there's obviously a limit on how much can be said within 90 minutes. Please feel free to contact us if you have further questions on these topics, or anything else that we covered during the Seminar.

<http://www.usa.canon.com/dlc/controller?act=GetArticleAct&articleID=2068>

Please select "Contact Us" near the bottom of this page to ensure that your questions or comments are routed correctly. Thanks!