

Close-Up

Inside:

In Pursuit of the
**Wildflower
Software for Macs**

To use "High Speed
Sync," or not
What kind of a
Photographer are you?

Spot Metering

Beginners' Corner: Have
Camera, Will Travel
Colour Temperature
and more.....

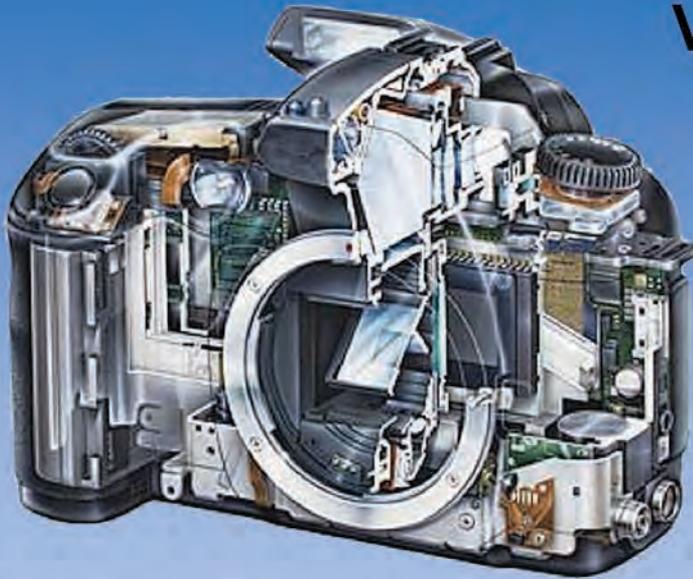


"Persephone: Queen of the
Underworld" by Lois Burton, is a
four-image composite. The model
is a studio shot; the other elements
are combined to create the scene.

Victoria Camera Service

**Full Service Camera Repairs
All Makes and Models**

Canon Nikon Olympus Sony
Pentax Casio Panasonic JVC
Samsung Manfrotto Hasselblad
Fuji Tamron Sigma Intec Leica



Serving Victoria and British Columbia for 50 years

www.victoriacameraservice.com

9-5 Monday to Friday 250-383-4311
110 - 864 Pembroke St.,
Victoria, BC, V8T 1H9

**Sensor Cleaning
Lens Repairs**

LCD Replacement

**Factory Trained Technicians
1 Year Warranty**

©2013 Casper Art. All rights reserved.



VIKINGS

LIVES BEYOND THE LEGENDS

MAY 16 - NOVEMBER 11, 2014

Get your tickets at royalbcmuseum.bc.ca/vikings

#RBCM Vikings

PRODUCED BY:

Museums Partner
www.museumpartner.com



LEAD MARKETING PARTNER:

VICTORIA
british columbia full of life



The exhibition is a joint venture between and produced by The Swedish History Museum in Sweden and MuseumsPartner in Austria.



Victoria Camera Club

Close-Up is the magazine of the Victoria Camera Club,
 Copyright ©, Victoria Camera Club, 2014, all rights reserved.
 Mailing address: PO Box 46035, RPO Quadra, Victoria, BC, V8T 5G7.
 Deadline for submissions for the September/October issue is August 5th 2014.
 Editor, Richard James, e-mail to newsletter@victoriacameraclub.org
 for submissions or to advertise in *Close-Up*.

Established in 1944, the Victoria Camera Club is a group of people who share the love of photography. We come together to appreciate each other's images, to learn, both from the feedback on our own images and from the images of others, and to exchange tips on how and where to take effective photographs. Our focus is on continuous learning. Our media include both film and digital and our expertise ranges from novice to master.

Events

We hold a number of events including:

- Three meetings a month from September to April (excluding December)
- Field trips
- Workshops
- Special Interest Groups (SIGs)
- Competitions within the club and externally

Meetings begin at 7:30 PM at Norway House, 1110 Hillside Avenue, Victoria, BC.

Membership

Annual fees include all workshops (except studio shoots and special events), meetings and all field trips unless travel/accommodation is involved. Annual fees are: Individual, \$85; Family, \$128; Student, \$43.

For current event information and locations please go to the website victoriacameraclub.org where you can also read or download the colour version of *Close-Up*.

For additional information: please contact the appropriate Committee Chair:

- Membership:* membership@victoriacameraclub.org
 - Workshops:* workshops@victoriacameraclub.org
 - Field Trips:* fieldtrips@victoriacameraclub.org
 - Meetings:* meetings@victoriacameraclub.org
 - Website:* webmaster@victoriacameraclub.org
 - Close-Up:* newsletter@victoriacameraclub.org
- or call Lloyd Houghton, President at 250-580-7154.

What's Inside

Club Calendar.....	4
President's Message	4
In Pursuit of the Wildflower	5
Software for Macs.....	8
Competitions	10
To use "High Speed Sync," or not	15
What kind of a Photographer are you?.....	16
Tech Tip: Spot Metering	17
How I Did It.....	18
Shoots Around Victoria	19
Beginners' Corner: Have Camera, Will Travel.....	20
Colour Temperature	21

Please support our advertisers.

**They make the publication of *Close-Up* possible.
 Remember to tell them that you saw their ad here.**

Member Discounts: VCC members can take advantage of discounts offered by several retailers in Victoria. Details are on the members only page on our website.

The Victoria Camera Club is a member club of the Community Arts Council of Greater Victoria (CACGV), Canadian Association for Photographic Arts (CAPA), and the Photographic Society of America (PSA).



Calendar

Our workshop and field trip program is too extensive to list in *Close-Up*. Please go to the calendar page on the website (www.victoriacameraclub.org) for the latest details of all our workshops, field trips and meetings.

Our next Thursday meetings will be in September.

Competition Night

Presentation Night

Members Night

Special Event

A special presentation by renowned photographer Ted Grant has been arranged for August, 21st. Check the calendar for details.

Workshops and Field Trips

These continue through the summer months. Please check the calendar pages for details. (victoriacameraclub.org/pages/kalendar.php).

Featured Field Trips

The Lavender Farm (Metchosin)

Sandcut Creek and Falls, Muir Creek (beyond Sooke)

Raptors in Flight (Duncan)

Night Photography

Featured SIGs

Nature SIG: July: "Seeing Images" - assigned nature shots at Government House. **August:** "Oak Bay Waterfront" - shoot at 10 designated locations.

Meeting, field trip and workshop visitor policy: Visitors are welcome to attend any three events in a two month period subject to the availability of space and a \$20 per session fee for workshops.

Cover Image

The cover image this month, "Persephone: Queen of the Underworld" by Lois Burton, is a four image composite. The primary subject was taken during a studio model shoot, and wings of an eagle in flight were added to the model. The two images were masked to remove unwanted background, and a new background layer of clouds was added. Breaking waves were added to the lower portion of the image, and the top was framed with an ancient stone archway. Several curves layers were introduced to achieve the desired colouration to represent the fires of the underworld.

President's Message

Emily Carr's writings have always struck a chord with me. A quote (from *Hundreds and Thousands*) which I keep returning to time and time again has to do with the idea of developing your own voice, or style, or interpretation. Not slavishly trying to copy what others are doing.

"If you're going to lick the icing off somebody else's cake you won't be nourished and it won't do you any good, or you might find the cake had caraway seeds and you hate them, but if you make your own cake and know the recipe and stir the thing with your own hand it's your cake. You can ice it or not as you like. Such a lot of folk are licking the icing off the other fellow's cake."

Whatever you do, you need to find your own way. Use what you see other people producing as inspiration for you to find your own version of what you put your camera in front of. Use their work or ideas as a springboard to produce something different. Recognize that you will probably find it very difficult for your work to look exactly the same as the work that inspired you anyway. There is usually more satisfaction to be gained from producing something different than producing "photocopies."

Don't take what Emily Carr says too far though. I am not suggesting that you cut yourself off from others. Mixing with other people is a great way to get inspiration. See what "cakes" others are making, see what other fields fellow photographers are travelling through, but find your own path. This can provide inspiration for you to branch out into something different, but still something that is you.

Our club provides plenty of opportunity for mixing with other photographers and seeing their work; workshops, field trips, Special Interest Groups (SIGs). If you are only attending the Thursday evening meetings you are missing out on a whole lot of what this club is about.

Working on a project with other photographers is another way of stretching yourself. You could find someone who has similar interests and pick a place or subject matter that you are familiar with. Challenge yourselves to make a collection of 30-50 images. Then what? The project needs to be seen by others. What better place than to present it to the club at Members' night. These will be starting again on the third week in September, which will be here quicker than you think. Make a plan now to be there and show off the project you've been doing over the summer.

Lloyd Houghton, President

by Gita McCormick

Wildflowers, per se, is not an exact term but rather refers to flowers occurring naturally in an area. They are not cultivated or planted.

On Vancouver Island, we are very fortunate that the island hosts so many beautiful wildflowers. We are also fortunate that we have ecological reserves that maintain the ecosystems critical for these flowers. Ecological reserves are set aside for various uses including the preservation of rare and endangered native plants. We have many reserves on the lower island, among them Mt. Tzuhalem, Honeymoon Bay, and the Somenos Garry Oak Protected Area (all Duncan/Cowichan area) and San Juan Ridge (West Coast Road).

The Honeymoon Bay ecological reserve protects the rare pink fawn lily, which is considered to be uncommon in the province. Other flowers found in this reserve include trillium, red columbine, wild ginger, bleeding heart, false lily-of-the-valley, false Solomon's seal, Smith's fairybells, and buttercups.

The Mt. Tzuhalem reserve has been set aside for the preservation of Garry Oak and the wild flowers that thrive in the meadows including camas, sea blush, lupines, shooting stars, death camas, balsam root, field chickweed, dovefoot geranium, fool's onion, yarrow, chocolate lilies, Menzie's larkspur, hooker's onion, forget-me-nots, white fawn lilies, calypso orchid and montia. There are also six species of grasses.

The provincial government's website for more information on the reserves and the protected plants within them is www.env.gov.bc.ca/bcparks/eco_reserve. You will find a wealth of information there on the eco-reserves, in-



cluding what you can expect to find in each, driving directions, maps and the main purpose of each one.



Types of wildflowers

We have many wildflowers close to home. The more plentiful ones are common camas, trilliums and white fawn lilies. Trillium is protected by law, one of three plant species protected in the province. Other species you'll see include bleeding heart, yellow violet, chocolate lily, shooting star, calypso orchid, coral root, solomon's seal, red columbine and many more.

Two great resources for wildflowers on Vancouver Island are *Plants of Coastal British Columbia* by Pojar & MacKinnon and *A Field Guide to Coastal Flowers of the Pacific Northwest* by Phillipa Hudson. The field guide is a laminated fold-out type that stores easily in your camera bag, great for use in the field.

Window of opportunity, seasonality of wildflowers

Wildflowers start to appear in early spring, some as early as February and they can continue to be found into summer, depending on the weather conditions and elevation. This year we started to see lilies in March, but most flowering is done by the end of April. If you head up to higher elevations the season is a bit later. Mt. Arrowsmith is a great place to see later blooms. I have seen flowers in the upper elevations in the Sooke hills, including Mt. Manuel Quimper, Koksilah and Waterloo into later May and June.

Photographing wildflowers, equipment and setup

Basic equipment for flower photography is a camera with a close-up (macro) setting, a foam kneeling pad

or knee pads, a plastic bag (for lying on), a plastic bag to cover your camera in the event of rain and a sturdy tripod. A remote shutter release always comes in handy. Other handy things to keep in your flower photography bag are mittens (for cold days), extension tubes to get closer, perhaps a few filters, macro focus rails, small reflectors (great for getting light into the centre of the flowers) and large diffusers (great for filtering light and for blocking the wind from moving your subject around). Clothespins or similar are great for helping to get your subject where you want it or for keeping grasses or other debris out of the way of your shot.



A macro lens for close-up work is recommended. This allows you to get close to your subject and allows your subject to be photographed at a 1:1 magnification meaning that the image on the sensor is the actual size of the object that you are shooting. One or more flashes or reflectors will help to light up your subject. I sometimes pack a small camp stool because you can end up spending a lot of time on the ground and it's a relief to be able to change positions.

When you have found your perfect subject, you now have to get set up to shoot. This is where the fun starts. When you set your tripod up remember to get low. Some tripods have a centre column that can be removed or can be turned to be parallel to the ground. This is most useful when you flatten your tripod. Depending on the shot, you may be shooting from below the subject to get backlit shots, or if the flower is a low stemmed variety, you will definitely be on the ground.

Now you have to take your settings into account. Depth of field comes into play for macro shots of flowers. At very close range you get little depth of field, and you'll need every millimetre. There is no right or wrong

setting; it depends what you want to shoot. Use the aperture to control your depth of field. A wide open f-stop, f2, will yield very little in focus, which is good if you are after the stamen or the edge of a petal to be the main subject of your shot. If you want more of the flower in focus, you will have to go to a mid-aperture, say f11 or f16. This depends again on what you want to be in focus and also what your equipment can do. All lenses have a "sweet spot" where resolution is best, often close to the middle of the aperture range, typically around f11. You want to try to get a fast shutter speed, 1/250 sec or better, which means your ISO setting may also need some adjustment. This is where a small reflector(s) comes in handy as well as a bigger reflector to help break any breeze that might be present. Also, if you use flash it will help in getting a faster shutter speed to get a tack sharp image.

When focusing for macro try to use manual focus. You know what you want in focus and your auto focus tracking might not get it right. Your camera might focus on a spot that you don't want to be the primary focus. Set the focus (magnification) to get the framing correct, then move the camera if necessary to bring it back into focus. I like to use the LCD screen on the back for focusing. This gives the opportunity to really see where I want my focusing to be and to zoom in on the area to ensure that I have accurate focus. Be careful though as this is a real battery drainer.



Wildflowers are delicate. Always remember if you are crouching to pay attention to where your feet are. You don't want to be uprooting any wildflowers in the process of photographing them. For example the calypso orchid plant dies when the flower is picked or broken. Wear good footwear, a comfortable pack if you are carrying one, stay safe and most of all have fun.



Do it Yourself and Professional Framing

Serving Victoria since 1976

Professional Quality - Personal Service
Mounting, Matting and Framing
for all Types of Artwork
Hundreds of Frame Styles
and Mat Colours

15% Discount for VCC Members

FREE PARKING at Rear - Off Hillside

2651 Douglas Street at Hillside 250-381-4022

PHOTO SAFARIS

Wildlife adventures for people who love to take photos

- 1 Namibia Wildlife (Oct 24-Nov 5, 2014)
- 1 Botswana (Nov 5-12, 2014)
- 1 Namibia Dunes (Apr 13-25, 2015)
- 1 Madagascar (Apr 26-May 13, 2015)

Led by Victoria-based professional photographer Mike Byrne



www.clocktowerimages.com d 250.889.6700

ESCORTED TOUR

PHOTO EXPEDITION TO ANTARCTICA

January 30 – February 11, 2015 | 12 Nights

Join this once in a lifetime opportunity with **professional wildlife photographer Mike Byrne** on a photographers' dream expedition.



Contact Debbie Peterson, Cruise and Vacation Consultant at 250-818-1465, or dpeterson@cruiseshipcenters.com



by Paul Ross

Mac computers offer a number of options for storing and processing pictures. Here I will go over iPhoto and Aperture, which are produced by Apple and are only available for the Mac.

When you buy a Mac, it includes a number of applications one of which is iPhoto. iPhoto is photo management software suitable for smaller libraries and beginning photographers. Here is a quick overview.

iPhoto allows you to organize your images in events, albums and files and allows you to assign keywords. To further the organization of your photos, iPhoto also has a star rating system so you can rate your photos, Places (their picture location tracking system) and Faces (its facial recognition system) so you can identify and find pictures with certain people in them. An early version of the facial recognition software kept on identifying the hub caps on my truck as a face and asked who it was; I named the truck so I can now find all the pictures with my truck in them.

iPhoto offers simple editing including, rotate, crop, straighten, enhance, red-eye reduction, retouch, effects (such as black and white, sepia) and standard adjustments, exposure, brightness etc. Support and training for iPhoto is available but limited.

iPhoto offers the ability to create slideshows, books, calendars and cards. You can create a book very quickly by highlighting the images you want in the book, click on New/Book, select the type of book and click auto flow. The books, calendars and cards are printed through Apple's print services and the quality is excellent. We have used this service to print books of our trips.

iPhoto allows you to select an external editor so you can edit your photos using a more sophisticated application. It integrates with photo-sharing sites such as Flickr, Facebook and Twitter and offers a rudimentary export function.

Aperture is Apple's advanced photo management software. Aperture was developed with the serious photographer in mind and includes all of the features in iPhoto and more. Aperture is similar to Lightroom, but different, and is priced at \$80.

Aperture has similar organizational options as iPhoto including Projects, Folders, Albums, rating system, Places and Faces. Smart Albums can be created

which can automatically include pictures in an album if it meets certain criteria (i.e. all 3 star pictures can be collected in an album).

It also has a Stacking feature so that images taken within a defined amount of time can be "stacked." One image can be designated the "pick" of the stack, and when the stack is closed only that picture will show which reduces the number of images you have to wade through when searching for a certain picture.

Aperture allows you to manage multiple libraries and the size of the libraries is only limited by the size of the storage device. There are back-up options built into the software. One of the options when importing photos is the option to make a back-up copy of the original file. There is also the Vault system which makes a back-up of your library.

When importing images into Aperture, there are a number of options, such as changing file names, adding or changing certain metadata fields and adding image location information. You can also decide whether you are going to use Aperture managed libraries or referenced files.

If managed libraries are chosen, Aperture manages the images and adjustments in a library. When importing the images, Aperture copies the images into a library (basically a database). All of the images I have taken in 2014 are contained in one Library file. This is the option I use because all of my image information is in one place and the Vault back-up system manages the back-up of all of my images and adjustments. This also gives me three copies of my images, the original, the one I am working on and the one in the vault. The one possible issue is if the library file becomes corrupt; however, Aperture will detect corrupt library files and rebuild them.

If referenced files are chosen, the image files are managed (and backed-up) outside of Aperture and the location and adjustments are managed in Aperture. Using this option the user must ensure that the files are stored somewhere other than the camera's card as the normal import options are "Store files -> In the Aperture Library" or "- In their current location." If you chose "In their current location" and the current location is the SD or CF card, Aperture does not copy the images from that location.

Metadata fields can be added, and I use the extra fields to track the adjustments I have made to the

images, such as which NIK software I used and if it has been sharpened for print or display.

Aperture offers a significant array of adjustments so many images can be fixed right within Aperture. One advantage to that is Aperture uses non-destructive editing and the image file remains the same size as the original (about 20 MB in my case) even after adjustments. You can also create or buy adjustment presets for different effects such as various black and white conversions.

There are a number of plug-ins available for Aperture including the NIK Software suite, onOne Software, DxO, Topaz Software and Human Software. Aperture can also be linked directly to external editors such as Photoshop, so Photoshop opens inside of Aperture. If the image is exported to PhotoShop, the NIK software suite or any external editor, Aperture exports the file in your choice of format (tif, psd, jpg) and the file can grow to 85+MB.

Another option is to use DxO Optics Pro 9.5 as your external editor. This would allow you to use the DxO raw processor, noise reduction, lens correction, geo-

metric straightening and other tools that are available in the DxO suite. This allows you to use DxO's superior raw processor, noise reduction, straightening tool and other features within Aperture.

Aperture can be used to create slideshows and books. Creating a slideshow can be as easy as highlighting the images you want in the slideshow, clicking on New/Slideshow, selecting the type of slide change and music that you want.

Aperture has other features such as the ability to create a light-table display for comparing and organizing images, and the ability to create web journals and link to on-line photo sites like SmugMug.

There is a significant amount of training available and a number of sites that are dedicated to the Aperture user base. Two of these are *The Aperture Blog* and *The Aperture Expert*. Both of these sites provide expert advice and adjustment preset downloads. *The Aperture Expert* also offers live training. The training site *lynda.com* also has a large number of sessions on Aperture.

PRISMIMAGING U.S.A.
YOUR COMPLETE PHOTO AND IMAGING SOURCE

www.prismimaging.ca

250.386.7787

791 Fort St.



- Digital Imaging
- Pro - photofinishing
- Custom Printing
- Giclee reproduction
- Pro film sales
- Large Format printing
- Canvas printing
- Business Cards
- Backlit Display
- E-6 and C-41 processing
- Passport Photos

Bridging Photo Technologies

September Theme: Backlit

by Richard Webber

Backlighting, sometimes referred to as contre-jour lighting, is a creative photographic technique. While this type of lighting is one of the most challenging, when done successfully it can produce dramatic results. Backlight happens when the main light (sun etc.) is in front of you and behind your subject. Its advantages include the emphasis on shape and the creation of a rim of light that you often see in portraits. Backlighting can also be used to create extended shadows that stretch towards the camera. For example, the use of bright vs dark contrast can result in intriguing silhouette shots. It is essential to choose where in your frame you want to place the light before it is possible to get the exposure right. There are typically three options: the light directly behind the subject, outside of the frame or in the shot. The last option is the most difficult so a good alternative is to place the light just outside the frame or partly behind the subject. Preferably keep the majority of the light blocked and avoid too much light. When there is not enough ambient light to capture the details in the foreground you can use fill flash or a reflector.

Getting the correct exposure is the main challenge. Evaluative/Matrix metering does not work well when you have a scene with high contrast because your camera's meter is being overwhelmed by the high levels of background illumination. To avoid this you can override your camera's automatic settings or manually set your exposure compensation to overexpose by some 1½-2 stops. Alternatively, use "spot metering" (see page 17) so that you can tell the camera which part of the frame is "middle grey." For instance, you could choose to meter on the darker areas to maintain details in the shadows and let the highlights go completely white. Alternatively, you can meter the bright part of the scene and let the shadows go completely dark to create a silhouette.

Useful Tips

- Use a lens hood or your hand to shade your lens to avoid lens flare.
- Use your camera's live view to compose the scene.
- Use the exposure lock to set the exposure, then recompose the scene and focus.
- The best time to shoot outdoors is early in the morning just after the sun rises or late in the evening before the sun sets, or anytime in the studio.

Check out this site for backlit photography images: photography.tutsplus.com/articles/100-beautiful-examples-of-backlit-photography--photo-3275.

2014 Annual Competition Judges

We would like to thank Greg Eligh, Allen Bargaen, and Mitch Stringer for agreeing to be our year-end judges for 2014. We also want to express our thanks to the members of the Competitions Committee for their hard work organizing and supporting the judges during this demanding process.

Greg Eligh: Greg has been a professional photographer specializing in commercial and corporate photography for 35 years in Vancouver, Toronto and Victoria. His images have been featured in magazines, corporate reports, books, advertising and even CD/album covers. His career has taken him to exotic locations including resorts in the Caribbean, off-shore oil rigs in Hudson's Bay and office towers in downtown Toronto! Greg is an instructor at Camosun College, and formerly at the Western Academy of Photography. Greg is also a respected photographic judge and a good friend of the Victoria Camera Club. www.elighphoto.com.

Allen Bargaen: Allen developed his interest in photography and outdoor adventure in Ontario. Now retired to Richmond, BC, he enjoys the challenges of photography and learning more about the techniques required to make great images. Allen's interests include Nature, Architecture, Macro and Portraiture. He has had articles published in Canadian Camera Magazine (CAPA), and has presented courses to clubs across Canada. He is a past President of the Richmond Photo Club. He has been active in CAPA since 2004. He is a past President and a past Chair of the CAPA judging course. Allen's philosophy is: "Wherever you are, there is a great picture waiting to be taken. One only needs to find it, and then take the time to get it into your camera." www.allenbargaen.com.

Mitch Stringer: Mitch is a freelance photographer in Victoria, BC, doing commercial photography, art reproduction, landscape, wedding and portraits since 1989. With a diversity of skills and a strong technical and creative understanding, Mitch enjoys the entire process of creating strong and exciting images for each assignment. Mitch has over 25 years of teaching experience having been a primary photographic instructor at both the former Western Academy of Photography and as a faculty instructor at Camosun College. Mitch is a primary organizer/participant of the *Photographers at Painter's* weekend held at Painter's Lodge in Campbell River. Mitch continues to follow the light, striving to capture the elusive perfection of 3-dimensional imagery on the 2-dimensional plane. www.mitchstringer.ca.



Advanced Nature Print - 1st
"Steller's Jay" by Mike Wooding

When shooting Steller's Jays the sun is not your friend. To record the many shades of blue in this beautiful bird, you need an overcast day. Nikon D700 and Nikkor 500 mm f4 VR II lens. ISO 1250; 1/200th sec at f5.6; -2/3 EV

Advanced Monochrome Print - 1st
"Up Next" by Barbara Burns

Two tutu clad ballet dancers, apparently waiting for their turn to perform, were shot in studio using one light in a large softbox positioned directly overhead and close to the dancers in order to emphasize their musculature. Canon 5D MkIII camera and 24-70 mm Canon L lens.

Advanced Open Print - 1st
"Two Farms" by Blake Ford

Taken at Steptoe Butte in the Palouse near sunset, the distance and haze reduced the colour considerably, so I brought back the colour by heavy use of contrast and saturation in Lightroom. Printed on Ilford Gallerie Goldfibre Silk paper, a semi-gloss paper which is warm toned and has deep blacks. Canon 5D, Canon 100-400 mm lens at f5.6, 1/1000 sec at ISO 400.



Advanced Digital Theme - 1st
"Light Painting" by Willie Waddell

The photo was taken on a club field trip at Gyro Park. The technique involved steel wool being placed in a whisk, lighted and twirled around on the end of a chain, creating the showers of sparks.





Intermediate Digital Open - 1st
“Shamrock Spider” by David McLean

This spider had made a home in a shrub we have on our sundeck. Over the course of the summer it developed some really interesting colours and markings. I decided to use it as a model in a portable macro-studio that I made.



Intermediate Digital Creative - 1st
“Starship Dockside” by Doug McLean

The image was taken from the penthouse of one of the tall Dockside Green condominiums. Zooming from 24 mm to 14 mm creates an apparent double exposure with movement shown in the streaks of light. The technique involved pausing at the beginning of the exposure zooming wide and pausing again.



Intermediate Digital Nature - 3rd
“Turkey Vulture Soaring” by Chantal Jacques

This image was initially placed in the October 2013 intermediate digital nature competition. The judge, Karen Stoyles, made the following comments: “Absolutely lovely capture of the vulture in flight. The background is wonderfully muted and soft. The texture in the feathers is strong from top to bottom. Placement of the subject in the frame works well. Lovely image, very well done.”



Intermediate Nature Print - 2nd
“Female Red-Winged Blackbird” by Don Peterson

Spring is a great time to photograph birds during mating rituals and nest building. The red-winged blackbirds are nearly always available at our local marshes and make very interesting subjects. This female with nesting material in her bill was captured on my Nikon D700, ISO 1000, 1/3200 sec, f7.1.



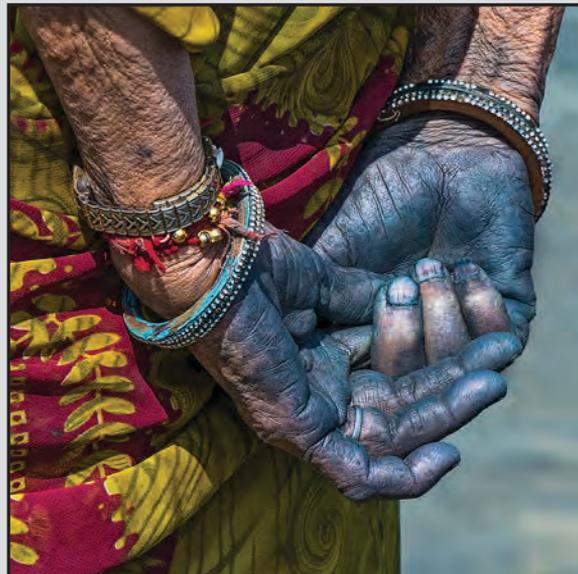
Novice Digital Theme - 1st
“Snowy Egret Fishing” by Del Lucas

It is interesting to witness how birds survive in the wild. I had the opportunity to observe this Snowy Egret fishing for minnows by making flying passes across a pond at The Riparian Observatory at Gilbert, AZ. With the pond being calm like glass and the lighting perfect I was able to capture some amazing reflected images. Canon 6D and Sigma 120-300 mm, f2.8 Sport Lens



Novice Open Print - 2nd “At Anchorage: Inveraray Scotland” by Pearson Morey

Driving from Glasgow to Oban, Scotland, we came across the village of Inveraray located on Loch Fyne. The two ships at anchor are: the Eilean Eisdeal, the last working Clyde Puffer, and the Arctic Penguin, now a museum. My thought was: this is a Kodak moment.



Novice Digital Open - 1st
“Indigo Hands” by Richard Marshall

I shot this image in Bagru, India. The hands belong to an older woman who helps dye cloth with natural indigo. Her hands had taken on an indigo glow after laying dyed cloth out to sun dry, and warranted a close-up before she washed the indigo from her hands.



Novice Digital Nature - 2nd
“American Avocet: Struttin’ Our Stuff” by Del Lucas

Birds in their natural habitat seem to have personalities like people. While photographing shorebirds in Gilbert, AZ, I noticed these two American Avocets darting about, side by side, as if with attitude and strutting their stuff. With the light at my back I was able to capture their beautiful colours. Canon 6D, Sigma 120-300 mm f2.8 Sport Lens.

Continuing EDUCATION



- **Photography and other courses for all levels and areas of focus.**
- **Taught by outstanding professionals with remarkable portfolios.**
- **Creative, technical, artistic, inspirational.**



Photography Level 1 – Introduction (*NEW-Afternoon course!)

Courses start Sept 8 & 9 & 22 & 24 with Mitch Stringer*

Digital Cameras for Absolute Beginners

Courses start Sept 13 & Nov 22 with Joel Friesen

Photography Level 2 – Intermediate

Starts Sept 25 with Mitch Stringer

Travel Photography – No More Snapshots

Starts Oct 8 with Mike Sroka

Faces, Fashion, Figures – Starts Oct 9 with Gregg Eligh

Portrait Photography – NEW! (Afternoon & Evening Offerings)

Courses both start Oct 20 with Jesse Hlady

Food Photography Workshop – NEW!

Starts Nov 15 with Gregg Eligh

iPhone/iPad for Absolute Beginners – NEW!

Courses start Sept 27 & Oct 25 with Joel Friesen

iPhone/iPad Photo Essentials – How to get Better Photos

Courses start Oct 18 & Nov 5 with Tony Bounsall

iPhone/iPad ARTography – Starts Nov 22 with Tony Bounsall

To register: 250-370-3550 (press 2) or online camosun.ca/ce

Questions? sofbus@camosun.ca or 250-370-4565

For full descriptions and fees please see
camosun.ca/ce/arts-culture.html

To use “High Speed Sync,” or not

by John Roberts

That is the topic for this month. Now, some of you are looking at me like I am on crack or have three heads; so let me explain so that I make more sense to you.

As we all know, in order to use flash, most cameras have a maximum shutter speed (Sync speed) that can be used, in order to make the flash and camera play nicely, and this is usually anywhere between 1/60th to 1/250th of a second. This might require us to use a smaller aperture than we want to, which in turn puts more of the image in focus because of the greater depth of field. The resulting look can be kind of blah.

However, there are some cameras that have a setting on them, that with the right flash, lets you use a faster shutter speed, 1/500th or even up to 1/8000th of a second. Every manufacturer calls it something different, HSS, FP Sync, Auto FP, but they all fundamentally do the same thing; they make the flash fire a series of shorter flashes. That looks like a long burst of light to our eyes and the camera sensor, so it no longer matters if the flash and shutter speed are perfectly synced up; the flash fires, and the shutter opens during that burst. This can be done either with the flash mounted right on the camera, or using the wireless TTL modes that many camera manufactures offer.

First things first, this does use up more battery power to achieve this. So if a fresh set of batteries in your flash normally gives you 100 full power flashes, expect about 2/3rd of that, especially if you are using the wireless TTL mode. I just wanted to get that out of the way up front.

However, what this higher battery consumption gives you is it the ability to use your lower f/stops! So if you own a lens with a f2.8, f1.8, or f1.4 maximum aperture, you can use those lenses wide open with this flash mode and now get a shallow depth of field with flash.

Another thing to keep in mind is that your flash does not have the range it does at full power in this mode; those short bursts reduce the overall range.

As you can see with the sample images here, there is a huge difference in the feel of the images. In the left image taken at 1/125th of a second at f11, there is a lot in focus in the background, whereas in the right image, taken at 1/2000th of a second at f1.4, the light seems



a bit softer, as well as having a much shallower depth of field.

This mode can also be used outdoors for portraits, close up photography or anything else where you wish to have a nice shallow depth of field.

Be sure to consult the manuals for your camera and flash to see if your combination supports High Speed Sync.

If you have any questions, or to see if your camera and flash can do high speed syncing, or you know yours can, and just want to know how to set it up, feel free to email me jrphotographybc@icloud.com.

STUDIO RENTAL

available weekday evenings

Rental includes equipment use and
1/2 hour equipment introduction course.

\$225 for 3 hour block

2 - Norman P2000 Power Packs (accommodates 7 heads)
7 - Light heads
6ft Photoflex half dome softbox
22" Beauty dish and honeycomb grid
4ft x 14ft Ceiling mounted lightbox
Manfrotto wall mounted articulated boom arm
9ft Mono-stand on wheels with boom arm
4ft x 8ft Flat reflector wall on wheels
4 - Light diffusion panels
Tripod
and much more!

melissawelsh
PHOTOGRAPHY

604 Yates St., Victoria, BC V8W1K9
t: 250.886.6464 e: info@melissawelsh.com

by Doug Ambridge

This is almost the first question people ask me when I tell them I am into photography. My answer usually is, "almost anything." I don't consider myself a specialist in any one particular category. What I do know is that I am not a Nature photographer in the truest sense of the word and certainly not according to the CAPA (Canadian Association for Photographic Art) criteria. I'm not out there crawling around on my stomach looking for the first wildflowers of spring, or sitting in a blind waiting for a particular bird or animal to come into view. My main reason for not being a truly serious nature photographer is I simply don't have the patience to wait for hours for that perfect shot.

I do like to photograph flowers and I can often be found roaming around Butchart Gardens. I have an annual pass and make full use of it. I have thousands of pictures of all kinds of flowers and one of these days I plan to do something with them. I also like to go out early in the morning especially in the summer months. My favourite time of day is first thing in the morning, usually just before sunrise, and in that first hour of light. One of the locations I like is around the marina in Oak Bay. I can get great sunrises there and, if I arrive early enough, the water is absolutely still allowing for great reflections.

I have even experimented with compositing. In the image below, "Time Traveller," the blending or layering images together really does intrigue me. I have only tried this a couple of times. The first time I experimented with this was last year. Some of you may remember my image titled "Blue." Unfortunately this was before I learned about the digital darkroom and saving images. *Close-Up* wanted it for the cover but because of my inexperience I did not have a full size image available. With "Time Traveller" I spent

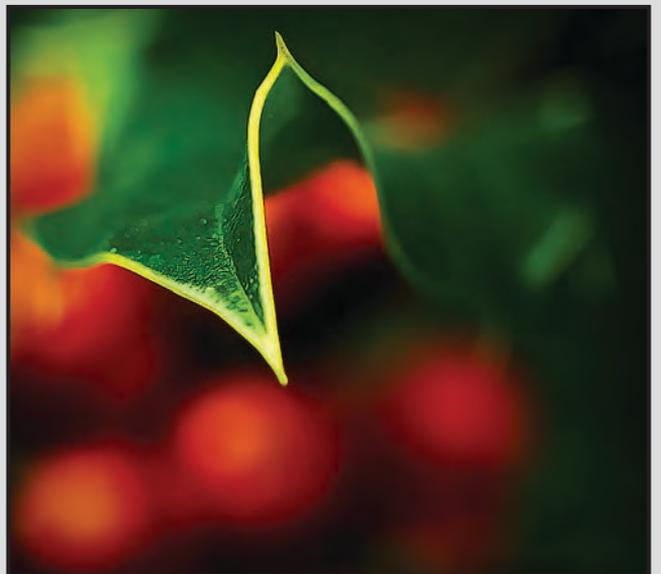


a lot of time on "You-Tube" learning the necessary steps and was rewarded for my effort in that month's Theme competition. The theme was "Time" and I had just returned from Egypt so I decided my theme would involve the passage of time. The main background image (columns) is of Jerash (Greco-Roman city) in Jordan, the Egyptian is from a carving on the wall at the Habu Temple, the huge clock is from the new St Pancras railway station in London and the smaller astrological clock is from Hampton Court Palace on the Thames just outside of London.

I guess you could say I am one of those photographers who photographs what I find interesting and what I consider to be a little artistic or simply something that captures my interest. I love sunsets, sunrises and reflections. To add to my arsenal and to increase the range of photographic possibilities I recently purchased my first macro and wide-angle lenses. I love the shallow depth of field I can achieve with the macro lens and the wide angle helps me to obtain a new and different perspective for certain shots.

I achieved a 2nd place award for "Holly Leaf" taken with my macro lens. A little help in post-production from the Google NIK Collection allowed some fine tuning of the leaf and completed the finished image.

I guess you could call me a journeyman photographer, one who hasn't found his niche per se but is happy to have a quality DSLR (Canon 60D) and the scenery of the West Coast and Victoria at my beck and call. I have travelled extensively to Europe and taken thousands of pictures of art and architecture but, at the top of my list, is what is readily available in our own backyard.



Exposure Metering

by Richard James

This is a topic that in total is way too big for this column so I'm going to focus on one metering option, "spot metering." Photographic exposure metering is based on one simple concept "the average scene reflects approximately 18% of the light falling on it." Of course, this is far from the truth and the various metering modes attempt to deal with it. Matrix/Evaluative metering for example looks at multiple points in the image and compares both the average and absolute values to "typical image data" stored in the camera CPU. It then attempts to get both highlights and shadows "well exposed."

Spot metering on the other hand looks at a very small area, typically around 1-5° of arc, and says that this area is 18% grey. Can you tell what "18% grey" looks like in colour? Well, this area might be 18% grey, but often isn't, so what do you do with this number?

The easy way out is to take a reading, in the same lighting as the subject, from a standard 18% reflectance grey card, which in theory will give you a well exposed image. This works best if the subject has a "normal" distribution of brightness. But if there are no really bright areas, you might be exposing at below the optimum value if you are using the "Expose to the Right" (ETTR) method of increasing the dynamic range of your image.

Another way of using spot metering is to take a reading from a highlight (but not a specular reflection) and the shadow area, take the average and set the aperture to this value. This will give you a value that is adjusted for the actual lighting range of the subject. This often works well, but again, check the highlight values if you are using ETTR. However, you need to ensure that both the highlight and shadow are within the dynamic range of the sensor (about 8 stops). If the range of lighting on the scene is greater than this you have to decide which is more important, and it's generally the highlights, so ensure that this area is correctly exposed, which means "not blown out."

Now, looking back at the September theme "Backlit" (page 10), we have a very typical high contrast situation. If you used Matrix/Evaluative metering for the scene it would likely be fooled by the large shadow areas that you've deliberately created. Try to make them lighter, and you will blow out the highlights which may include important detail.

If you simply metered off the subject's face, which is in shadow, then with spot metering you'd make that 18% grey. This clearly isn't a shadow black! Remember that your objective is to get the highlights properly exposed and that you may have to let the shadows "fall where they may." In this case you would take a spot reading off of the highlights (18% grey) and then open the aperture by about 2 – 2½ stops to retain the detail in the hair. A reading off the deepest shadow should then fall about 5 – 6 stops below your camera setting to retain some detail (assuming an approximate 8 stop range in the subject). This method explicitly sets the highlights where you want them for the ETTR method.

Spot metering is also an excellent way of checking your lighting setup where you are using studio lighting, or even reflectors outdoors. Your objective is usually to achieve a particular lighting ratio that will give you a specific effect. By taking spot meter readings of key points in the subject you can easily see what the ratio is and make adjustments to your lighting to ensure it gives you this effect and is within the dynamic range of the sensor. Of course, you need to visually check the image as the camera sees it both using live view and in the image on the LCD panel.

North India Photography Tour

Escorted small group experience

October 18th - November 3rd, 2014

Especially Designed for Photography Enthusiasts

Join us as we photograph Camels in the desert, the Taj Mahal at dawn, forts, palaces and the colourful market towns of Rajasthan. Experience the incredible culture and cuisine of India. Celebrate Diwali with a local family and capture images during the famous Pushcar camel fair

Marlin Travel in Cadboro Bay

2564 Sinclair Road

susan.swindells@marlintravel.ca

250-595-1181

Only four spots left call today !



Swamp Horse

by Doug McLean

This image was taken deep in the Okefenokee Swamp, a 1770 km² peat-filled wetland straddling the Georgia/Florida border. Most of the swamp is protected in the Okefenokee National Wildlife Refuge and the Okefenokee Wilderness. The swamp, known as blackwater, forms as vegetation decays and tannins leach into the water, making a transparent, acidic water that is darkly stained, resembling tea or coffee.

As we slowly moved along the narrow, black channels of the swamp in a shallow-draft boat, my attention was drawn to our wake and the combination of the windless conditions, blackwater, shoreline vegetation, trees and sky, which created a fascinating pattern of distorted reflections. After many shots, this one caught my eye. The composition resulted from a combination of the reeds on the shore, as the horse's mane, and the boat wake cutting through the dark water, superimposed on the contrast of the overhanging trees and sky's reflection.

There was minimal image manipulation, cropping to 70% and conversion to monochrome. The last tweak involved adding a pupil, and this resulted in a strong eerie stare to match the swamp atmosphere.

Creative shots are conjured in many ways. I've seen some stunning images, from abstracts to detailed manipulative techniques using specialized software, and while very successful, they don't have to be that complicated. Remember it's the imagination that is key and recognizing unusual conditions can produce results. Watch for them!

Nikon D800, 70-200 mm f2.8 lens, ISO 800 at f7.1, 1/250th sec.



Varied Thrush

by Mike Wooding

The Varied Thrush is one of my favourite birds. This west coast rainforest species has a haunting, almost ethereal single note song that has been a welcome wake-up call on many a dreary winter morning. I am truly fortunate to be able to observe and photograph this beautiful bird in our back yard. Each December I set up my blind about 17 feet away from a small tray feeder, over which I place my perches. A thick cedar hedge, approximately the same distance behind the feeder, creates an appropriate background for my images. Usually I get Spotted Towhees, Chestnut-backed Chickadees, Red-breasted Nuthatches, Song and Fox Sparrows, Dark-eyed Juncos and the occasional Bewick's Wren, but my primary target is the Varied Thrush.



This image was taken with a Nikon D800 with a Nikkor 500 mm f4 VR II lens mounted on a Gitzo tripod and Wimberly head. About 90% of my avian images are taken with this gear. I use a Nikon SB 900 flash mounted on a Wimberly flash bracket and have a Nikon SB 600 on a tripod lighting up the hedge in the background. I shoot with both my camera and flashes in manual mode. Usually the light remains fairly constant at this time of year, and I find that the pre-flash used in TTL mode sometimes spooks the birds. For this image the settings were ISO 800, 1/250th, at f7.1. The SB 900 was set at 1/32 power and the SB 600 at 1/2 power.

I always try to use natural native perches, in this case a mossy stump with some Salal leaves in front. My goal is to entice the thrush into my "studio" with food (usually cracked corn or crumbled up suet), and have him strike a pose that shows him off in all his glory.

Tuesday Shoots

by Doug Ambridge

July 8: Ross Bay Cemetery. Unusual trees, winding carriageways, intriguing monuments, imposing statues and outstanding sea vistas will spark the interest of any photographer. But can one also capture a sense of history from the lives of Victoria's past in these scenes?

As in any landscaped garden, the photographer must contend with the play of light and shadow to portray the mood of this setting.

July 22: Alleyways. Connecting the thoroughfares of Victoria are secluded passageways such as Trounce, Waddington and Fan Tan Alleys. These pathways are haunts of both unique businesses and graffiti artists. For the photographer, they present an opportunity to capture another side of Victorian life.

On the technical side, one will be shooting in the shadows or low light conditions to expose the vivid colours of graffiti paintings or the fine texture of wooden paving bricks.

August 12: Delicate. The mischievous gleam in a child's eye, the elaborate pattern of a spider's web or the pastel shades of a summer bloom offer challenges for the photographer.

Many more subjects like these suggest that a subtle hand is needed to present the essence of these wonders.

August 26: Backlit. Yes, this topic is a repeat, but worth getting away from the boring open shade to capture some memorable images.

Who can forget *Red Pen in the Sun* by Penny Codding? Obviously, it is a difficult lighting situation to master, but with practice, it can produce some outstanding results.



Weekend Shoots

by Dave McLean and Donna Robertson

There are a few field trips in the works for July and August. A lot of the details haven't been ironed out at the present time; however, a summary of items that are in the works are as follows.

July:

Lavender Farm: Mid-July is the last chance this year to visit the Lavender Farm before the Lavender is harvested for the year. The last opportunity to take photos of the rows of fragrant, purple flowers, the geometric designs of the gardens and the other plants that are grown on the farm.

Sandcut Creek and Falls, Muir Creek: are on the West Coast Road between French Beach and Jordan River, about 30 km past Sooke.

A small creek has sculpted its way through its sandstone bed, separates into two channels, and then falls about 15 feet to a small pool on the pebble beach.

Photo opportunities include the falls, with the sea and horizon as backgrounds, or you can focus on a smaller scale at the creek itself as it carves its way through the sandstone. If you choose to wander further up the creek-bed, you will find a number of creek riffles and small reflecting pools that reflect the green, moss-covered trees and other vegetation.

Heading back to Victoria we intend to visit Muir Creek. Muir Creek has Old Growth trees, fossils in the sandstone along the beach, and otters have often been seen in the creek.

August:

Raptors in Flight: Pacific Northwest Raptors, located at 1877 Herd Road in Duncan has a number of hawks, owls and eagles. They have flying demonstrations at 1:30 & 3:30 daily. Take this opportunity to practice close-up flight shots of these birds, a real challenge that you need to practice to perfect.

Other shooting opportunities: (trip leaders needed)

Low Tides: July 11-13, August 9-11 - get out and shoots seascapes and intertidal life. **Full Moon:** July 12 and August 10 - shoot the rising moon at sunset, or moonlit landscapes. Remember the weather is warmer in summer than winter.

Have Camera, Will Travel

by Nancy MacNab

As summer arrives, many of us will be heading off for a vacation. Whether you will be staying in Canada or going overseas, driving or flying, chances are that you will be taking your camera with you. Some of the questions we should ask ourselves include: how much camera equipment should I take with me? Which lenses should I take, and do I need a tripod? What about saving the images?

First of all, you need to decide on the main purpose of your vacation. Which equipment you will take will vary depending on that reason. If you are going on a family holiday with small children, you may want to restrict your equipment to the bare minimum of one body, one lens and no tripod. On the other hand, if you are taking a photography tour and will be shooting everything from landscapes to macro to wildlife and birds, then you may want to take everything you can.

Your choice of transportation may also limit your equipment options. If you are flying, the baggage limits and cost of extra weight or surplus bags will encourage you to pack lighter. On the other hand, if you have a camper or fifth-wheel trailer, you can take it all.

Who will be your travelling companions? Travelling alone, with another photographer, or with a patient partner will make it easier if you bring more equipment and take time to get the perfect shot. If you are with someone who gets impatient with waiting for you to find the perfect angle, set up and level your tripod, adjust the polarizing filter, get the framing just right, and sort out the right aperture and shutter speed, then review the result and check the histogram before going through the whole process all over again, with minuscule adjustments, then you should probably limit your equipment if you want your relationship to survive!

What kind of photography will you be doing? If you will be mainly in towns and cities, touring museums, castles and cathedrals while visiting family, you can probably leave your 500 mm "birder" lens behind.

A tripod is always useful, but takes up space and slows you down. You will have to weigh the merits of stability versus the weight and space of packing it and whether your destination will allow you to use it. A monopod may be a worthwhile compromise.

Another consideration will be what will you do with your equipment if you are not carrying it with you? Does your hotel have a safe where you can leave your unneeded equipment? You can get a cable net that can cover your entire bag and then padlock it to an immovable object if your hotel doesn't have a safe. If you are travelling by vehicle, is it safe to leave your camera gear in the trunk?

When it comes to the accessories, make sure you remember to take memory cards, batteries, battery charger, voltage adapter and the appropriate plug adapters if you are going overseas, and all the wires and cables necessary to hook everything together and plug them into the wall.

How are you going to save your images? Will you be taking a laptop or tablet? Will you have time to do some editing while you are away? Do you have a system for backing up your storage device? How will you organise your photos?

The final question will be: how are you going to carry all your equipment. Which bag or bags to choose will depend on your answers to the above questions, especially that of how much equipment and what mode of transportation.

When it comes to the actual photography, the same rules and adjurations apply as when photographing at home. Use your feet to find the best angle. Vary the height from which you take your photos as sometimes the best shot will be from a low angle (e.g. while crouching or kneeling), while others will be better taken while standing on a bench or other object. Take more than one shot and change the composition, angle, aperture and shutter speed to get different results.

You will still need to ensure that your horizons are level and that no branches are growing out of someone's head. Watch your backgrounds for stray bits poking in at the edges, or necessary parts being unnecessarily trimmed (such as someone's feet). If you are photographing water, windows, or other reflective objects, including leaves, then get your circular polariser ready to minimise the bright spots.

So now that you have everything packed, including a photography magazine or book or two to occupy your spare moments, the biggest thing to remember is to have fun! We look forward to seeing your images at the club this year.

by John Coenraads

Even under widely varying conditions of illumination, ranging from noon on a sunny day to deep shadow or sunset, the human eye is capable of accurately perceiving colour. In psychology, this neat trick of the visual cortex that produces this illusion is known as colour constancy. The equivalent function in a camera is referred to as Auto White Balance (AWB). Through computation the camera attempts to determine if there is an overall colour cast to the scene for which it then compensates. Relying on the AWB setting often yields good results, but if not, you can always select a setting for a particular light source such as shade, cloudy or flash. In difficult situations, the camera can even be “taught” what white is by shooting a grey card and creating a custom setting. But if you want to take full control, you will go to the K setting and dial in a particular colour temperature. In this article we will explore some of the neat physics that lies behind this somewhat mysterious number. (Remember though that none of this affects the RAW file and if you shoot RAW, these adjustments can all be made in post-processing.)

To work a piece of iron, a blacksmith must judge the temperature of the iron as it is being heated in the forge. He or she does this by carefully examining the colour using terms such as brown red, light cherry red and yellow red, knowing that each hue correlates with a particular temperature.

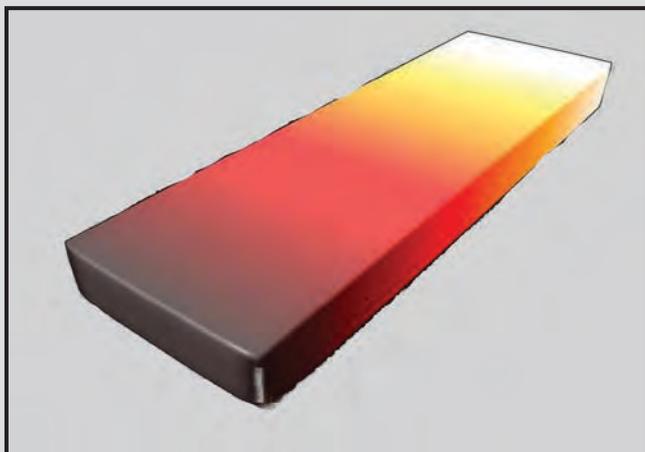


Figure 1: Different parts of this iron bar are at different temperatures as indicated by the colours of light emitted. Source: Creative Crash.

This holds true because, to use physics speak, iron is a black body. Iron looks black (hence the term blacksmith) and thus absorbs all colours of light and, just as efficiently, radiates these colours when heated. This

correlation between colour and temperature means that we can use temperature to precisely describe the spectrum of colours emitted by a light source.

Light is a Wave

Among the most beautiful equations in physics (yes: physicists can wax rhapsodic about an equation) are the four James Clerk Maxwell derived that describe all electric and magnetic phenomena. Furthermore, he showed that any vibrating charge emits an electromagnetic wave travelling at the speed of light. At this point, Maxwell realized that visible light itself must be an electromagnetic wave occupying a measly one octave in an 81 octave spectrum ranging from radio waves, through micro-waves, infra-red, visible light, ultra-violet, X-rays to gamma-rays. It's all the same “stuff” with similar properties differing only in wavelength and the effects they produce.

Colour

Colour is a notoriously imprecise term. Let's distinguish clearly between spectral colour and psychological colour. When a physicist talks about colour, he or she is almost invariably referring to spectral colours, i.e. the red, orange, yellow, green, blue and violet seen in a rainbow each of which is associated with a precise wavelength ranging from 390 nm to 700 nm. For a physicist, colour and wavelength are synonymous. In everyday discourse, most people will assume that colour refers to psychological, (subjective) colour, the totally private sensation we experience when light enters the eye. While the spectral colours will evoke in us the sensation of pure, saturated colour, mixtures of spectral colours will yield the sensation of non-spectral colours such as brown, purple and pink. In fact, the visual cortex will interpret a mix of spectrally pure red and green as yellow even though no spectral yellow is involved. This of course is why the three RGB channels in digital photography can fool the eye into thinking it is seeing the whole gamut of colours.

Temperature

For most of us, the Fahrenheit scale, with its arbitrary placement of the freezing point of water at 32 degrees is still familiar. The Celsius scale, with zero as the freezing point of water is more logical. But physicists like to make their equations involving temperature nice and tidy and for that, the preferred scale is the Kelvin scale, where zero is absolute zero: the coldest temperature achiev-

able. On the Celsius scale, this corresponds to -273°C . When specifying colour temperatures of incandescent sources, large numbers, such as 3000 K for 3000 Kelvin (not degrees Kelvin), are typically encountered.

Black Bodies Radiate

A simple way to produce light is to heat an object, such as the filament in a light bulb, to incandescence. A tungsten filament is very close to being a black body (perfect absorber and emitter) and the intensity of the various spectral colours (wavelengths) emitted follows a characteristic curve, looking much like a lopsided hill, identical to that of any other black body at that same temperature.

Thus a single number, the colour temperature, is all that is needed to precisely define the colours present in a light source. See figure 2.

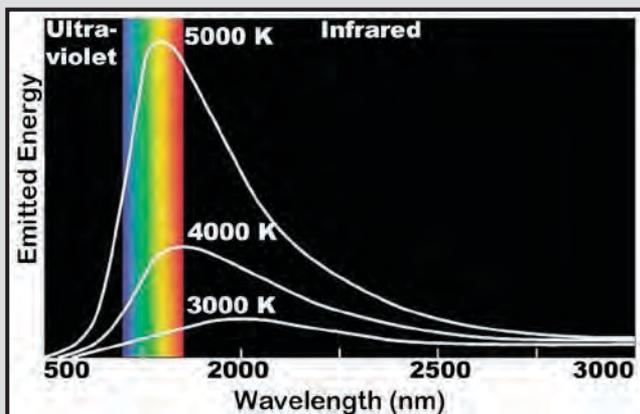


Figure 2: The spectral distributions for black bodies radiating at a variety of temperatures. Image: Courtesy National Radio Astronomy Observatory.

Direct light from the sun, (colour temperature: 5780 K) peaks nicely in the middle of the visible light spectrum and therefore appears to us as white. An incandescent bulb (4000 K) peaks in the red part of the spectrum and is clearly deficient in greens and blues thus requiring compensation. The black, and invisible, region to the left of the visible spectrum corresponds to ultraviolet radiation: the stuff that gives us tans and sun burns. The black region on the right corresponds to infrared: the direct heat we feel from a hot stove. It is clear that a tungsten bulb emits, and wastes, most of its energy in this region and this is the reason light bulbs get hot.

Fluorescent Lights

Fluorescent lights have colour temperatures ranging from “warm” (2700 K) to “cool” (6500 K). But if you touch

a fluorescent light, you’ll quickly realize that there’s nothing inside anywhere close to being that hot, i.e., a fluorescent light is far from being a black body because it produces light by phosphorescence, not incandescence. In this case the colour temperature specified is actually the so-called correlated colour temperature (CCT) which is essentially the temperature of a black body which would produce a similar colour spectrum in the visible region. So if you are photographing in an office with cool-white fluorescent lights, (CCT of 4100 K), this is the number you would dial into the K setting of the white balance on your camera. The same technique works for studio lamps, photofloods etc. where the colour temperature is known. Even moonlight has a published CCT of 4100 K.

In the case of most commercial/retail fluorescent lights, it is worth noting that dialling in the published CCT will still not guarantee accurate colour reproduction. Unlike the smooth and continuous spectrum of a tungsten bulb, a fluorescent light spectrum is very “spiky.” Even so-called daylight fluorescents may have sharp peaks at red, green and blue and not much in between making the accurate rendition of complex hues unlikely.

Light is a Particle

For someone passionate about physics, like myself, the graph in figure 2 has special meaning. So if you will indulge me, let me explain. A little over one hundred years ago, physicists were struggling to find a theoretical explanation for the shape of the curves in figure 2. The brilliant Max Planck used Maxwell’s equations in his analysis and came up with a widely divergent prediction. Something was clearly wrong. As a last resort, he postulated that the light energy emitted by a black body could only take on discrete values or quanta. This produced the right predictions. Even though Planck thought his solution just a mathematical trick, Planck’s insight won him the Nobel Prize for Physics in 1918. It was Einstein, in his famous 1905 paper on the photoelectric effect, who showed that Planck’s quanta were a physical reality; we now call them photons. This started a turning point in physics culminating in the development of quantum mechanics, which holds that all energy and matter exists as a weird amalgam of wave and particle. Einstein won the Nobel Prize for Physics in 1921 for his contribution. Just for good measure, Einstein also developed Relativity theory, thus being responsible for establishing the (ironically incompatible) twin pillars of modern physics.

**PRINT
MOUNT
FRAME
DISPLAY
ARTBOX**

YOUR ART GOES HERE
(we'll make it look fabulous)



Club members save 10% or more off our list pricing!

ArtBox is your professional print, mount & frame shop. Friendly experts working with you from start to finish on just about any project, from business cards, to fine art prints, to murals or commercial display. All of our work is done completely on-site (even blockmounting & canvas) so your project is ready in half the time at a great price!

artboxvictoria.com

250.381.2781

2504 Douglas (at Bay)

info@artboxvictoria.com



Beau Photo carries the latest bodies and lenses from Canon, Nikon, Fuji and Hasselblad as well as professional lighting, grip, camera bags, filters, accessories and even film and darkroom supplies.

We are a local, independent shop, where clients are not just customers, but a part of our larger photographic community. Stop by and see how personalized service and advice can change the way you look at photography.



Sales • Rentals • Advice

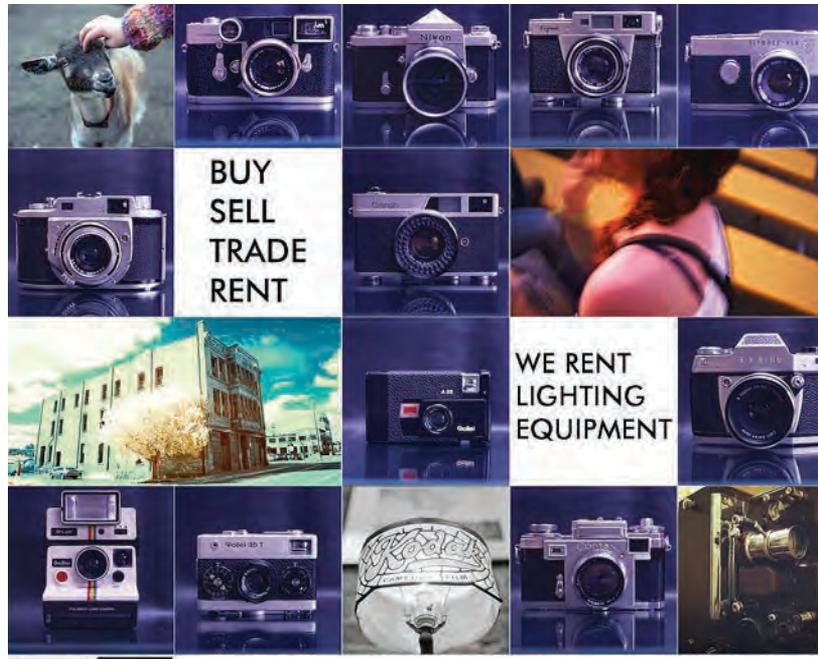
BEAU PHOTO Beau Photo Supplies
1520 W. 6th Ave.
Vancouver, BC
604.734.7771 1.800.994.2328

beauphoto.blogspot.ca

[@beauphotostore](https://twitter.com/beauphotostore)

[Beau Photo](https://www.facebook.com/BeauPhoto)

www.beauphoto.com info@beauphoto.com



**BUY
SELL
TRADE
RENT**

**WE RENT
LIGHTING
EQUIPMENT**

**CAMERA
TRADERS**

Discount for
VCC Members

110-560 Johnson Street,
Victoria, BC., 250-382-6838
www.camera-traders.com



CAPTURE THE BIG PICTURE

And own the moment with the new Nikon D4s with its new 16.2MP FX-format CMOS image sensor paired with Nikon's spectacular new image-processing engine, EXPEED 4. Be able to freeze time in an instant with its 11 FPS shooting and shoot in any kind of lighting situation with its exceptional light sensitivity of up to ISO 25,600. And now you can produce high quality 1080p HD Video with flexibility to capture stills and adjust audio settings. A truly phenomenal camera that combines speed and performance in the field.

Combine this with the 14-24mm F2.8 G ED and 18-35mm F3.5-4.5G ED Lenses and you are now all set to capture any moment and tell the full story. (Photo by Corey Rich using the Nikon D4s)



Largest Selection of New & Used Cameras and Accessories in Western Canada

KERRISDALE CAMERAS

www.kerrisdalecameras.com

FOLLOW US FOR THE LATEST NEWS & DEALS:



www.facebook.com/KerrisdaleCameras

<https://twitter.com/KCLvictoria>

<https://twitter.com/KCLmain>

VISIT US AT:

3531 Ravine Way, Saanich, BC

By Tim Hortons in Saanich Plaza

250-475-2066