

Contact Sheet

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Optics in Photography

Last week you saw how food photography has changed over the past 50 years. Many of the reasons for those changes are the equipment and optics that are now available. My father was a dentist and wanted to get some very close images of the mouth and some of the orthodontia he was doing. In 1953 an Exakta SLR camera with a 58 mm lens (was about \$300 or a \$6000 lens today) could get good light with f/2 opening and would focus to 20 inches from the camera whereas today almost all 50 mm lenses can do some macro work and will only set you back about \$100 in today's money (\$5 in 1953 currency). Therefore, in the 1950's we saw a table full of food and very few close-ups. He also had a very difficult time getting enough light into the back part of the mouth since there were no electronic flashes (just flash bulbs – which really scared the patients when they went off). Also, the ASA rating for his color slide film was **8**. He almost did a cartwheel when Kodachrome brought out 25 speed film!

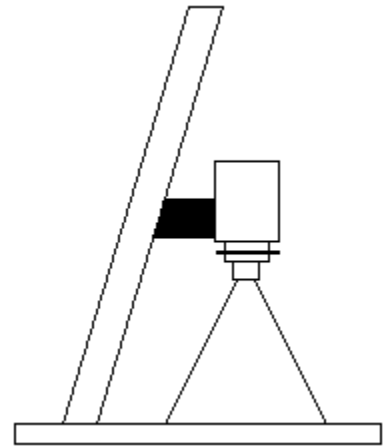
Why do we have so many problems getting our image on film? After all light is simply "... a form of electromagnetic radiation which moves in waves rather similar to the ripples on a pond, except that light is vibrations of electric and magnetic forces. Described thus, light behaves as a form of energy. But whenever light interacts with matter – as when it is absorbed by a substance

or emitted from a lamp – it behaves as a form of matter, composed of a stream of infinitesimal particles called photons." Source: Pg 13, Color, from Time-Life series

It really is a difficult concept to think of light as having two different forms and yet it is still just light. At about the time of the birth of photography, science told us that we just lived in a "sea of light" just like an ocean is a sea of water. Even that concept is somewhat hard to follow!

When light bounces off an object, it comes to our eyes, or camera, in a totally random fashion; and we would see no image if we didn't have a way of taking this random data and placing it on the retina, or film. If we have a pinhole in front of our camera, light rays from the top of the object will go in a straight line and strike the bottom of the film. In a similar fashion, a light ray from the bottom of the object will go through the hole and strike the top of the film. We therefore will have an image; but because the pinhole is small, only a very tiny amount of the light that struck the image will reach the film. In essence, we would be able to see in very bright light, and only if the object didn't move! This is why you only see pinhole photographs of houses, barns, etc. on sunny days!

How to solve this dilemma? A larger opening will help let in more light but will give you "circles of confusion" to give you blurry images. (Through a small pinhole, the glint ray from a diamond ring goes straight through the



hole and strikes just one spot on the film whereas in the larger hole example the rays spread out a little going through the larger hole creating the blur circle.) The way that photographers have solved this problem is with a lens that will collect this light in the larger "pinhole" (the opening in the shutter) and bring all of these slightly diverging rays back into focus on our film. This is called a converging lens - - which is just your standard magnifying lens.

When writing this newsletter, I realized that I put way too much data into my talk about optics since I am now only on slide seven of the sixty nine slides. Therefore, I will use some of the other information as short fillers in newsletters to come - - and I apologize for the flurry of stuff I threw out. Hopefully, the written "fillers" will not be as confusing as I must have come across!

Snow Photography

Besides the above lecture we also had about a half hour discussion about how you can get the correct exposure when there is snow in your photograph. Snow creates many problems in so many of our winter images because our camera interprets all of that snow as an 18% gray card. Therefore, our image on the film or digital chip will be 0-2 f/stops off. **Rodney Jack led the discussion of how he gets his best snow pictures.** But there was an incredible amount of discussion about the variability of these snow images. For this reason we want to expand on our discussion and will devote the entire February lecture to SNOW PHOTOGRAPHY. Please bring in some of your snow images - - the good ones, the ones with problems, the ones that are almost there, the really

contrasty ones, the blown out snow, the loss of details in the shadows, etc. And hopefully, we will solve your problems with snow while you help us solve our consternation.

Snow is with us so much of our year in Idaho, and we all need to know the tricks to get the best images!

Thanks, Farr's
Special thanks to Farr's
Jewelry for the use of the digital projector at the last Advancement Program. We learned a lot!

Roger is in the process of completely redoing our web site. He needs some pictures from each member to include, but so far he has not had a good response especially on the various National Wildlife refuges. Please share your images since he is also trying to set up an individual photographer portfolio gallery. These images should be about 4 x 6 inches so that they will download quickly for people who want to see our images. Also, at this size there are not enough pixels for the image to be printed very well if someone chooses to steal the image. Get your images to Roger.

He is trying to set the site up so that a visitor to our region would know what to take some good images of. In this way they will continue to visit our site when they might be planning a trip, trying to decide what time of the year to visit, etc. If we have this much information on the web site, he feels that the web visitor will want to visit and join our club on a permanent basis.

Dues are due!
\$25/year/family!

Field Trips

We just completed the still life Saturday workshop that Cathy White worked so hard to get set up. What an event! We had a man in his mountain man attire with the musket, weapons, etc. to photograph. We had a natural light setup, two light tables with backdrops, and two setups with studio flash. We had bottle after bottle, crystal, flowers, old cameras, marbles, beads, jewelry, a mounted lynx - - and the list just goes on. No one wanted to quit when we had to return the room to the church's peaceful chair and table arrangements.

Thanks to all who participated - - and special thanks to those who took their time to bring in the equipment and light boxes and studio flash. Thanks, Cathy, for putting this all together.

Check with Tim Sommers for the best date to go to the eagle shoot in Utah in early February. Last year there were about 500 eagles to photograph, and many images could be had with a 70-210 zoom! We will try to keep the information on our web site up to date about this trip. You can get a working schedule of future field trips on our internet site, www.eips.net, which would have any of the corrections listed in a more timely fashion since this newsletter only comes out once a month. Also, because of weather, etc., occasionally the trip will be moved to a different date. If you want to stay on top of when an event will happen, check with Roger who can get you on the e-mail list.

There is also information on the web site about the dog sled races in St. Anthony that several club members will be attending.

Advancement Program

Congratulations are in order for the members who were awarded Certificates of Achievement at the January banquet. They have worked hard to show these images to us, and we as a club thank them for sharing their craft and knowledge with us. The following awards were given:

300 points	Marita Rizzi-Grande
600 points	Bill Drake
	Bob Seidel
	Krista Soderquist
1500 points	Mary Dunhour
2100 points	Doug Jenson
3000 points	Roger Heng
3300 points	Sue Heng
6600 points	Jan Larcom

Thanks for some very good images!

The schedule for the remaining sessions of the year is as follows:

February – It's a Small World

March – Photographer's Choice

April – Monochrome

May – Photographer's Choice

June – Fog

July – Photographer's Choice

August – The Past

September – Photographer's Choice

October – Critters

November – Photographer's Choice

December – Color Explosion

About Pinholes

In a series of three barn images by Ansel Adams, he used a pinhole 1/50 inch giving an exposure of 6 seconds. A pinhole of an 1/8 inch resulted in an exposure of 1/5 seconds but was almost too blurry to tell it was a barn. With a lens used, the exposure was 1/100 second.

Monthly Meeting

Date: Feb. 1, 2007

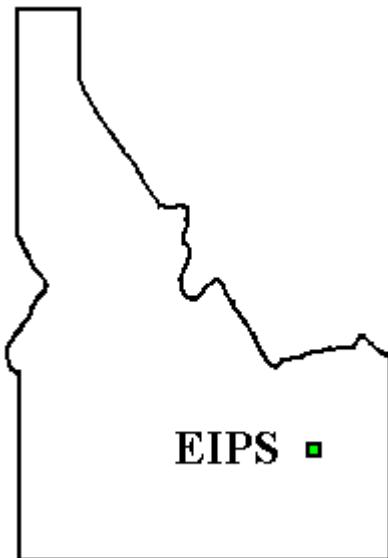
Time: 7:30 p.m.

**Location: 1900 Grandview
in the Conference Room**

Program:

Since we did not get to fully explore the problems involved with snow photography at the last meeting, we want everyone to bring some of their snow images - - good, bad, overcast days, bright sun, etc. Together we will solve the problems caused by snow.

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Graffiti

EIPS is a group of amateur and professional photographers who meet on the first Thursday of each month for our educational lecture. Then the third Thursday is our Advancement Program where we share some of the images we have done. We meet at 7:30 p.m. in the 1900 Grandview Ave conference room. We all become better photographers!

After suspending our current rules and regs (we still do not have an updated set – but we are working on that problem), we took the recommendations of the Nomination Committee and voted on their slate. They felt that since the officers had only been in office a few months, they should be permitted to serve for at least a full year. This passed unanimously.

