



# the Viewfinder

the Newsletter of the Syosset Camera Club

Volume 33 Number 3 November 2003

## The Human Eye & The Camera *Orrin Edwards*

Human vision is binocular and stereoscopic, that of the camera is monocular. This explains why so many photographs lack "depth"—the photographer, through his stereoscopic vision, saw his subject as three-dimensional and forgot that, with only one "eye," his camera "saw" his subject without depth. Unless depth is expressed in a photograph in symbolic form, the picture must appear "flat."

The eye, guided by the brain, is selective. It sees subjectively, generally noticing only what the mind is interested in, wishes to see, or has been forced to see. In contrast, the camera "sees" objectively, recording everything within its field of view. This is why so many photographs are cluttered with pointless subject matter. Photographers who know how to see in photographic terms edit their pictures before they take them by eliminating superfluous subject matter through an appropriate angle of view, subject-to-camera distance, choice of lens, or other means.

## Results of October Competition

Judged By Bernice Halpern

### Black & White Prints "A"

Print Of The Month- Clem Kleinmann  
Eight- Alan Agdern, Orrin Edwards,  
Moshe Markewitz

Print Of The Month- Bill Schmidt  
Eight- Aileen Harrison, Anita Sax,  
Ira Sunshine, Jerome Sax, Linda  
Volin, Ernst Halpern, Judith  
Ruderman

### Black & White Prints "B"

Print Of The Month- Bill Schmidt  
Eight- Sarah Kleinmann

Nine-Maylan Monahan

### Color Slides Class "A"

Slide Of The Month- Eugene Fox  
Nine-Orrin Edwards, Annette Fox,  
Carole Greenberg  
Eight-Stan Rothman, Ramesh  
Patwa

### Color Prints Class "A"

Print Of The Month- Alan Agdern  
Nine- Clem Kleinmann, Moshe  
Markewitz

*Eight- Gerald Harrison, Orrin  
Edwards, Sy Roth*

### Color Slides Class "B"

Slide of the Month- Barry  
Goldstein  
Eight-Selma Roth

### Color Prints Class "B"

The eye is sensitive only to that part of the electromagnetic spectrum, which we know as light. Photographic emulsions, sensitive also to other types of radiation, such as infrared, ultraviolet, and X-rays, make it possible to produce pictures, which show familiar objects and **Continued on next page**

## Meeting Schedule

### October

**16 Creating award Winning Prints** presented by Bill Rudock  
**23 Digital Cameras,** presentation by Alan Agdern

### November

**06 Competition,** Judged by Andy Kurchey  
**13 Megapixels?** presentation by Mel Ettinger

### 20 Theme Competition

*"Reflections"*

### December

**04 Competition** judged by Leon Hertzson  
**11 Program** to be announced

**18 Field Trip New York City at Night.**

### January

**08 Board Meeting**  
**15 Competition** judged by Sherman Paur

**22 This One Gota a Nine A** look at high scoring prints and slides with member comments

**29 Tapestry in light** presented by Robert Rode

### February

**12 Competition** judged by Mel Ettinger

**19 Light from Paradise** presented by Jim Paradise

**26 Using a Modern Camera** Speaker and Questions

### March

**04 Board Meeting**

**11 Competition**

**18 Program**

**25 Program**

new and more informative forms as well as to show many things otherwise invisible. The focal length of the eye's lens is fixed, but a camera can be equipped with lenses of almost any focal length. As a result, the scale of the photographic image is virtually unlimited. The angle of view of the eye is fixed, but lenses range in angle of view from very narrow to 180 degrees. Unlike our own vision, a photographic angle of view can be chosen to give a desired effect.

Our vision functions so that we see three-dimensional things in the form of rectilinear perspective. Although most photographic lenses are designed to produce this type of perspective, other lenses produce perspective that is cylindrical or spherical. The remarkable properties of these types of perspective make it possible to create impressions and show relationships between a subject and its surroundings, which are beyond the scope of other graphic means.

**See you Sunday 8 am at  
the On Parade Diner.**

Breakfast  
Camaraderie  
Fun Foto Field trips

The focusing range of the eye is severely restricted in regard to near distances; anything closer than approximately 10 inches can be seen only indistinctly, increasingly so, the shorter the distance between the subject and the eye. Small objects can be perceived less and less clearly the smaller they are,

until a limit is reached beyond which they become invisible to the naked eye. The camera, however, equipped with a lens of suitable focal length or in conjunction with a microscope, has none of these restrictions.

To the normal eye, all things appear sharp at the same time (this is actually an illusion caused by the ability of the eye to constantly adjust focus as it scans a scene in depth). The camera produces not only pictures in any desired degree of unsharpness, but can also make pictures in which a predetermined zone in depth is rendered sharp while everything else is unsharp.

The eye adjusts almost instantly to changes in brightness, its pupil contracting and expanding as it scans the light and dark parts of a scene. The "pupil" of the camera, the diaphragm, can be adjusted only for overall brightness. The contrast range of our vision is thus much wider than that of a photograph (exception: photographs taken on XR film which has a contrast range of 100,000,000:1); we can see detail in the brightest and darkest parts of a scene whereas in a corresponding photograph, if contrast was high enough, such areas would be shown as overexposed, detailless white, and underexposed, detailless black. To compensate for the limited contrast range, a photographer must check the brightness range of his subject with an exposure meter (since his eye is untrustworthy in this respect) and if contrast is excessive, he must take appropriate counteraction.

The eye cannot function instantaneously, cannot retain an image, and cannot combine a number of successive images in one impression. The camera can do all three. As a result, a photographer cannot only superimpose different images in one picture, but also express movement graphically, either by instantaneously "freezing" the image of the moving subject or by symbolizing motion through blur and multiple images and thus expressing movement in heretofore unknown beauty and fluidity of form.

The eye notices and accepts as normal the apparent converging of receding parallel lines in the horizontal plane. However, as a rule, it does not notice in reality, and rejects as "unnatural" in picture form, the apparent convergence of receding parallel lines in the vertical plane. The camera does not make a distinction between horizontal and vertical parallels but treats them alike. The result is well known in photographs of buildings and is generally considered a fault.

The eye sees everything it focuses on in the context of its surroundings, relating parts to the whole. We do not see sharp boundaries between the things we see sharply and the things we see vaguely or not at all because they are near the periphery or outside of our field of vision. As a result we are generally not conscious of any particular overall design because we focus successively upon different parts of a much larger whole, which we never take in all at once. In contrast, a photograph shows the subject out of context, cut off from related subject matter so that attention is centered upon it alone and the picture must stand on its own merit. Because it is a small, limited view it can be seen at a glance. Each component of the picture is seen in relation to the others in the form of a design, and if the design is weak, the picture "falls apart." As a result, a subject that was appealing in reality because it was contributed to by surrounding subject matter that had a special atmosphere is dull in picture form when divorced from those elements. Photographers who know how to see in terms of photography are aware of this and, if possible, choose subjects that are inherently photogenic. **Continued on next page**

## **Nature Photography**

*a poem by Carol Goldstein*

I saw a praying mantis  
measuring steps on my  
bush.

I ran to get my camera.

I didn't have to rush.

We looked at each other,  
both locked in time.

Me, waiting for the right shot.

It, waiting for the climb.

We looked at each other,  
both locked in time.

Me, waiting for the right shot.

It, waiting for the climb....

So I left....

The eye is sensitive to color; black and white photography "sees" color as shades of gray. However, these gray shades can be changed to a great degree through the use of color filters. To produce pictures that are effective, a photographer who works in black and white must not only know the corresponding shades of gray for different colors, but he must also know how to change these normal shades into lighter or darker tones.

The eye does not normally notice minor changes in the color of light. Color film is very sensitive to small changes in the color of light. Since we generally do not notice small changes in the color of light, which, however, cause corresponding changes in the color of objects, we are astonished when we see such changes recorded on color film. It is the failure to notice such changes in the color of the incident light, which accounts for the majority of color transparencies in which color appears "unnatural." However, if we could compare such transparencies with the subject seen under the same conditions under which the picture was made, we would most likely find that the color film was right and our judgment wrong. Later I'll have more to say about this phenomenon color adaptation, which is the most common cause of apparently "unnatural" color transparencies.

The eye cannot store and add up light impressions--the dimmer the light, the less we see, no matter how long and hard we stare. Photographic emulsions, however, can do this and, within certain limits, produce images whose strength and clarity increase with increases in the duration of the exposure. This capacity to accumulate light impressions makes it possible to take detailed photographs under light conditions of a level so low that the

### Bulletin Board

10/26/03 (Sun) **Fall Foto Fest**- full day program sponsored by Cosmo Chapter of PSA. Morning presentations and afternoon shoot. Skyline Hotel, 10<sup>th</sup> Ave. at 49<sup>th</sup> St. PSA members \$20, non-members \$25. Contact bev2279@aol.com or call Beverly Goldey @212-753-6591.for registration information.

11/2/03 (Sun) PFLI presents David Middleton and "The Nature of Vermont" 10 AM to 12:30PM, Commack High School Auditorium. Admission \$10 per person call Sy Roth, 516-433-2516 for tickets while they last.

Through 1/11/03 "**The Jewish Journey**" at the Brooklyn Museum. Photographs by Frederic Brenner.

At a Library near you- a reading list on digital photography is available at the Plainview Library and don't miss the SCC exhibit at the Farmingdale Library

Visit [phototakers.com](http://phototakers.com) on the web for photography discussion and inspiration.

eye can see little or nothing. ◆

### Digital Trivia *Barry Goldstein*

**Bit Depth**- The quality of a digital image depends on the number of pixels composing the image as well as the *bit depth* of each pixel. The greater the bit depth, the more information can be contained in each pixel in the form of colors or tones in the case of black and white. The number of colors or tones possible increases exponentially

Bits	Binary Equiv.	Colors (Tones)
1	2 <sup>1</sup>	2
2	2 <sup>2</sup>	4
3	2 <sup>3</sup>	8
4	2 <sup>4</sup>	16
8	2 <sup>8</sup>	256
16	2 <sup>16</sup>	65,536
24	2 <sup>24</sup>	16,777,216

with the number of bits used to represent a pixel. The table on the left, illustrates the exponential relationship between bit depth and the number of tonal gradations possible.

**Digital Lenses**- It's like a cruel joke. You buy an interchangeable lens SLR so you can use all your great lenses and now you are told that you should be using the new digital lenses. Is this really necessary?

The sensor in most digital SLRs is smaller than a 35mm film frame. This means that you are only using the light that comes through the center portion of the lens. Your investment in all that beautiful glass is not being efficiently utilized and you are lugging a lens around that could be a lot smaller for the same coverage. The lens makers have invested most of their effort in correcting what happens at the periphery of the image. If you are using a lens designed for film photography on a digital camera, you are not using a significant portion of that part of the lens.

**Continued on next page**

On the other hand, since the optimal portion of the lens is being used, distortion should be pretty much undetectable. But keep in mind that as CCD manufacturing technology advances, sensor size may increase to that of a 35mm film frame and you will then need these larger lenses. This assumes that the proposed 4/3 format for which Olympus has invested a tremendous stake, does not become an industry standard. Much will depend on the success of the soon to arrive E-1 professional camera.

Consider also, that there is a slight intentional blurring from filters in front of the CCD in most all digital cameras. This is to minimize errors from high-resolution objects, which has the effect of limiting how sharp the image can be. That means that lens sharpness above a certain resolution is wasted. The downside to using traditional lenses is that light falling straight down on a pixel comes through the appropriate color cell of the CCD and is correctly measured, but light coming from an acute angle can come through a cell adjacent to the intended one and the camera will be measuring the wrong color. Lenses designed for digital cameras keep the light rays nearly parallel as they leave the lens, avoiding this problem. As a purely practical matter, this effect may be more of a theoretical problem than a real one. ♦

### Can you name this camera? *Barry Goldstein*

*Answer to last month's quiz:* A close examination of the illustration would have given the answer away. The name of the camera is engraved on the bottom right of the camera front. It's a Mercury II (Model CX). This is a highly capable American camera made by the Universal Camera Co. of Rochester, NY. Like most cameras of the era, there is no rangefinder. The shutter is a rotary focal plane with speeds from 1/20 to 1/1000. The format is half-frame, which means that images are half the size of a 35 mm frame (1"x 3/4"). Another oddity about this camera is the location of the controls. All but the rewind knob and shutter button are located on the front of the camera. The hump that houses the rotary shutter has a depth of field scale on it. Because the lens is a relatively wide 35 mm, depth of field is not much of a problem. At f8, when focused at 10 ft., everything from 5 ft. to infinity will be sharply focused by the Tricor 35 mm f3.5 lens.



Judging by the under-whelming response, last month's mystery camera question may have been too hard; so I'm making this month's easier. Affectionately called "The Brick," this camera may be the most popular 35 mm camera ever made. It was manufactured from 1939 through 1966 and is still in use by legions of devotees.

Name the camera make and model and send your answer to [bgoldstein@gbronline.com](mailto:bgoldstein@gbronline.com). Winners will be announced. ♦

### Review of Mirror Lens *Barry Goldstein*

As promised last month, the following is a review of Phoenix 500 mm f8 mirror lens in practical use.



My first disappointment was when I tried to fit the lens to my vintage Nikon FTN. Because the lens is very wide at its point of attachment to the camera, it would not clear the camera's prism housing. This should not be a problem with the other 99.999% of people. Another problem was focusing at f8, which can be difficult in low light and advancing years. I tested the lens for sharpness by mounting a newspaper page at 25 feet from the camera. The camera was mounted on a sturdy tripod and the mirror locked up to minimize vibration. Two floodlights illuminated the subject and exposure was made on Ilford HP5 film.

**Results:** the image is clear, but falls short of being critically sharp. Use of the 2x telextender doubled magnification of the image as expected, but did not noticeably degrade the quality of the image. Light falloff is noticeable but not severe enough to be a problem in normal use.

**Conclusions:** the lack of aperture control and critical sharpness are drawbacks, but the light weight, compactness and low price make this lens a consideration for nature photography. ♦

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