Menomonee Falls Recreation Department

Camera Club

Vol. No. 186 - September 1994

Meetings first Tuesday of each month - 7:15 pm
Menomonee Falls North Middle School
N88 W16750 Garfield Drive

SEPTEMBER 6 MEETING: WINNERS IN WACCO'S INTERNATIONAL PHOTO CONTEST

The Wisconsin Area Camera Clubs Organization (WACCO), an umbrella organization representing camera clubs in Wisconsin, annually hosts a photo contest which draws entries from around the world. Join us on Tuesday, September 6, to view the winners and honorable mentions of this year's competition. Viewing the winners of this contest is an excellent chance to get ideas to improve your photo taking!

This meeting is the kick-off of another year for the Menomonee Falls Recreation Department Camera Club. Annual dues of $10.00 will be collected at the meeting. If you have friends who are interested in photography but have never joined a camera club, encourage them to come to the meeting and check us out!

MARK YOUR CALENDARS!

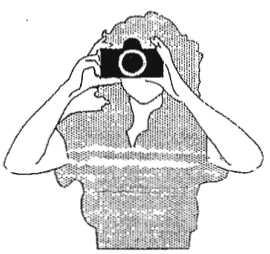
Our camera club will hold its meetings on the first Tuesday of each month, September through June, at 7:15 pm. All meetings (except field trips) are held at Menomonee Falls North Middle School, N88W16750 Garfield Drive. Upcoming meeting dates and *tentative* topics include:

October 4	Polarizers; Camera supports / existing light photography
November 1	Field trip to Risser Color Service Inc.
December 6	Flash synchronization speed; Composition; Holiday party
January 3	Filter systems; Various format cameras
February 7	Monte Zucker videotape on posing and lighting for portrait photography
March 7	Model shoot
April 4	Auto-focus systems
May 2	Selection of photos for summer display in Menomonee Falls library
June 6	TBA

DON'T FORGET YOUR DUES:

Annual dues of $10.00 will be collected at the September meeting. The cost is low and the friendship is worth it alone much less the photo tips and opportunities.

NIKON PHOTO CONTEST INTERNATIONAL 1994



Nikon Corporation cordially invites you to participate in the Nikon Photo Contest International 1994. This renowned contest offers photographers the world over the opportunity to both match and share skills with other photographers around the world. The deadline is **October 31, 1994.**

Categories for this year's contest are Free Subject and Children. Winners receive Nikon products and include a $5,00 grand prize, two $2,500 first prizes, eight $1,000 second prizes, and 25 $500 third prizes, plus special honorable mention and close-up awards. Entries may be color or black and white prints or color slides, taken by any 35mm camera. Your local Nikon dealer should have entry forms-- I got mine at Mike Crivello's, 13975 West Capitol Drive, or write to Nikon Inc., 1300 Walt Whitman Road, Melville NY 11747-3064.

FUJI AND NIKON HAVE A DIGITAL STILL CAMERA THAT DOESN'T USE FILM

Tokyo (Reuter) - Fuji Photo Film Co. and Nikon Corp. have jointly developed a single-lens reflex digital electronic still camera that stores images in a high-speed memory card, the two companies announced on August 23.

"(Fuji and Nikon) have separately developed digital cameras but there wasn't a SLR type before," said a spokesman at Fuji Film. "It was too costly for us to develop a new camera separately, so we decided to cooperate."

The high-speed memory card allows users to store and process images taken by the new camera in a personal computer, the Fuji spokesman said.

The new digital camera would cut the amount of effort and time required for developing film and putting images into personal computer systems, he said.

Because the new camera is an SLR, it can offer high-quality full-color images, the Fuji spokesman said.

"Also, users can attach any F-mount Nikon SLR lenses they already have to the new camera," the Fuji spokesman said.

The new camera would be useful to press photographers, in the medical profession, the fashion industry and the publishing business, he added.

"This new digital camera would be nice to use because it shouldn't weigh much," said one professional photographer.

"But the camera can offer only 1.3 million pixels and the images would be not clear enough," the photographer said. Ordinary film has as many as 16 million pixels.

[I saw this article in the August 24 Investors Business Daily -Ed.]

Menomonee Falls Recreation Department

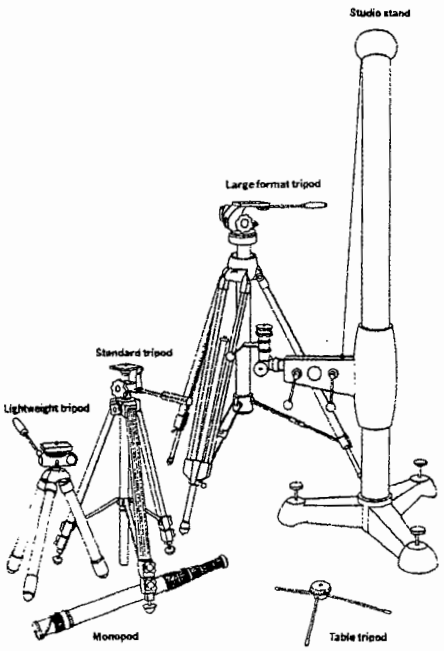
Camera Club

Vol. No. 187 - October 1994
Meetings first Tuesday of each month - 7:15 pm
Menomonee Falls North Middle School
N88 W16750 Garfield Drive

Officers
President: Steve Haynes 251-3791
Treasurer: Bob Schwan 786-5449
Secretary: Jon Moscicki 464-6479
V.P. / Newsletter: Mark Mathu 251-8274

Board Members
Bill Rietz 251-7106
Jeff Klug 1-628-0555
Roger Crill 1-284-6627

OCTOBER 4 MEETING TO FEATURE CAMERA SUPPORTS AND EXISTING LIGHT PHOTOGRAPHY



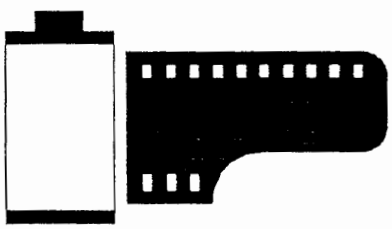
October is here and with it comes shorter days, leaving us with problems to solve when the light available is no longer enough to allow photography by ordinary means. Taking photographs by available or "existing" light has the advantage of enabling you to capture the realism and atmosphere of the occasion. It means that you can work with greater freedom and remain more unobtrusive than with lamps or flashes. Of course, there are technical problems when the lighting is excessively dim, contrasty, or uneven.

Join us at Menomonee Falls North Middle School on **Tuesday, October 4**, for a fascinating look at taking photos using only the natural light. Often these methods require long exposure times--too long for hand-held photography. With this in mind, part of the presentation will include a discussion of methods available for supporting your camera.

If you have a unique method of supporting your camera, please bring it in to share with the other member of our club.

...AND IF THAT'S NOT ENOUGH...

The October 4 meeting will also feature a brief presentation on selecting and using polarizing filters. It is common practice to screen out the polarized component of light from a subject in order to render skies a deeper blue, to reduce reflections and glare in natural scenes both to "see" into water and increase the saturation of colors, and to eliminate reflections in copying.



BRING IN YOUR ASSIGNMENT SHOTS: LOW-ANGLE PHOTOGRAPHY

Members who have taken interesting prints or slides from a low vantage point are encouraged to bring them to the October meeting to share with other members.

HOW ABOUT CLASSIFIED ADS IN NEXT MONTH'S NEWSLETTER?

As your new newsletter editor, I would like to continue Jon Moscicki's idea of including classified ads in the newsletter. I do not want to nor intend to make the newsletter become just a listing of photo equipment for sale, but my first year in the camera club made me realize that buying and selling photo equipment is another facet of this great hobby.

If there is interest, advertising will be carried in the November and March newsletters. Club members may get items listed for free by giving Mark Mathu a description, cost, name, and telephone. If you have equipment you would like to sell, something you've been searching for but can't find, or just are looking for used equipment for your Girl Scouts troop, see me at the next meeting, or call me at 251-8274 (evenings and weekends) or 359-2222 ext. 2042 (days). The deadline for the November newsletter is Wednesday, October 19.

Don't forget--the June meeting is also our *White Elephant Sale*--when members bring equipment for sale and trade to the meeting. This sale is also an excellent place see first hand what our members have available.

WACCO FALL 1994 COMPETITION

The Wisconsin Area Camera Clubs Organization (WACCO) will be sponsoring a fall photo competition:

When:	Saturday, November 5, 1994
Where:	Midway Hotel - Airport 5105 South Howell Ave., Milwaukee
Time:	12:30 pm Competition in the Symposium Room 5:30 pm Banquet / Awards in the Flight Room of the restaurant
Categories:	General Slides - Doors / Windows / Stairs; Rivers or Streams; Self-portrait; Nature Slides - Birds; Open Black-and-White / Color Prints - Nature; Open
Deadline:	**October 29** for all slides, entry forms for all categories, banquet reservations and fees Prints may be delivered in person from 11:00 am - 12:30 pm the day of judging
Cost:	$4.00 for 1-4 General Slides; $4.00 for 1-4 Nature Slides; $3.50 for 1-4 Black-and-White Prints; $3.50 for 1-4 Color Prints

Members who have been with the club a few years are well aware of WACCO and its competitions. (Heck, I've only been with the club for one year and even I know about them!) New members may want to consider entering this contest. Full details and entry forms for the contest will be available at the October meeting, or contact Jeff Tamms at 414/961-7114.

For those who live for WACCO's contests--here are the categories for upcoming competitions:
Spring 1995: Houses of Worship; Food; Hand of Man; Nature - Wild Animals
Fall 1995: Domesticated Animals; Shadows; Patriotism; Nature - Insects / Spiders

DON'T MISS A SINGLE ISSUE OF THE CAMERA CLUB NEWSLETTER!

Members who have not yet paid their 1994-95 dues should plan on doing so at the next meeting! Dues are $10 for the entire year. If you cannot make next month's meeting, call Bob Schwan at 786-5449 to make payment arrangements.

Members who have not paid their dues will be dropped from the newsletter mailing list.

BOARD MEETING NOVEMBER 8TH

Officers and Board Members of the camera club are reminded that a meeting is scheduled for 7:15 pm Tuesday, November 8 at Denny's in Menomonee Falls.

Don't forget--November 8th is election day!

WHAT IS POSTERIZATION?

Editor's note: Last month's meeting featured the winners of WACCO's photography contest. Many members were fascinated by the some of the entries, which had a surreal look to them. These slides were created using the process of posterization. I have attempted to give a brief synopsis of the technique, based on information in The Encyclopedia of Practical Photography, Eastman Kodak Company. I hope it clears the air--at least a little--on this subject. Perhaps one of our more advanced members might consider giving a future presentation on the technique.]

Artists and designers usually represent subjects in pure line or in a full range of graduated tone. However, rich, broad effects can be produced by replacing full graduation with a limited number of flat tones. This effect, when applied to photography, is known as posterization.

During posterization, the normal tones of a subject are separated into several distinct tones with the use of high-contrast films. These films are then printed in register and in combination to create a photograph that shows a sharp delineation of tones. Color posterizations often show unreal color combinations.

Posterization lies on the fringe of photography and graphic arts but is, nevertheless, a purely photographic technique. Posterized reproductions can be characterized by the number of tones of which they consist. For example, the simplest posterized print consists of two tones--black and white. Black-and-white posterization is easily achieved by limiting the process to a single tone separation or a high-contrast negative. Reproductions of this type are suitable for newspaper advertisements.

More common are three- and four-tone posterization. A three-tone print consists of black (representing the shadows), gray (representing the middle-tones), and white (representing the highlights). A four-tone print consists of black, white, light gray and dark gray. Posterized prints consisting of more than four prints are usually not successful, since the result looks too much like a continuous-tone image. In color posterizations, tones are represented as different colors, so that more "tones" can be used effectively.

For special effects, tint or texture screens can easily be included in the posterized print; screens can be attached to the tone separations at the second or third stage of the process. To eliminate interference between screens, a line screen can be printed vertically on one tone separation, and a similar screen printed horizontally on a second tone separation. The final reproduction will show a cross-hatched effect from the combination of the two screens.

Although posterization produces unique and dramatic results from appropriate photographs, not all photographs lend themselves to this process. Pictures with simple patterns and strong designs usually produce the best results. A little experimentation with some of the many possible variations in posterization technique indicates that results are limited only by the imagination.

Menomonee Falls Recreation Department

Camera Club

Vol. No. 187 - October 1994
Meetings first Tuesday of each month - 7:15 pm
Menomonee Falls North Middle School
N88 W16750 Garfield Drive

NOVEMBER 1 MEETING IS FIELD TRIP!

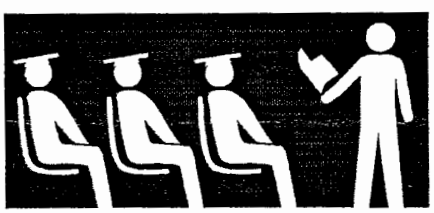
Please join us on Tuesday evening **November 1** for an interesting field trip to a professional photo finishing lab. We will be visiting Risser Color Service Inc., 5330 West Electric Avenue, Milwaukee. The meeting will feature state-of-the-art tools used to process and enhance photographs and slides.

Car Pooling: There are two meeting places to assemble car pools to travel to Risser Color Service. You may meet at our usual location in Menomonee Falls North Middle School or at Tiffany's Family Restaurant, 5171 S 108th Street, Hales Corners. The meeting time for both locations is 6:45 pm. If you are meeting at Tiffany's, consider arriving early and having dinner there!

CHICAGO AREA PHOTO PROGRAM IS NOVEMBER 20

Information about this program was available at last month's meeting. If you would like a copy, including a registration form, see Mark Mathu at the November meeting.

The Chicago Area Photo School (CAPS) features a full day of how-to-do-it information for beginner to advanced photographers. You will find many courses to suit your needs that will enhance and improve your photographic skills. The program will be held at Wright College, 3400 N Austin Ave., Chicago on Sunday **November 20** from 8:30 am to 4:50 pm.



Enrollment must be received by **November 12**. Capacity is limited so be sure to register early to get your choice of programs. The program cost is $35.00 for the entire day. Free parking is available in the school parking lot. A box luncheon may be ordered when filling out the registration form. It includes a half ham, half turkey sandwich, pickle, cheese kabob, apple slice and a soft drink or coffee, and costs $5.00.

Class periods start at 8:30 am sharp and end at 4:50 pm. Most classes require 70 minutes, some require two consecutive 70 minute periods. Instructors are advanced photographers and experienced in their field of presentation. Classes are offered in the following subjects: General, Color Slides, Print Making, Nature, and Photojournalism.

International Camera Corporation will be in the Vendor / Exhibit / Commercial room. Bring your camera for a free check-up.

DOES ANYONE HAVE A TECHNICAL SESSION TOPIC?

Our meetings feature a brief session on a technical topic of photography. Last month's meeting, for example, featured Ken Cina's presentation on polarizing filters. Upcoming topics include flash synchronization speed, and filter systems.

If someone has an idea for an upcoming topic, please contact president Steve Haynes.

BOB'S BEANBAG SOCKS

Camera club member Bob Schwan gave an excellent presentation on making a beanbag support for you camera from pinto beans and a sock. He made several and had them available at nominal cost. There may be one or two left -- contact Bob at the next meeting, or call him at the number listed at the top of the newsletter if you're interested in one!

WACCO PHOTO CONTEST IS JUST AROUND THE CORNER!

The Wisconsin Area Camera Clubs Organization (WACCO) will be sponsoring a fall photo competition:

When:	Saturday, **November 5**, 1994	
Where:	Midway Hotel - Airport 5105 South Howell Ave., Milwaukee	
Time:	12:30 pm	Competition in the Symposium Room
	5:30 pm	Banquet / Awards in the Flight Room of the Restaurant
Categories:	General Slides	Doors / Windows / Stairs; River or Stream; Self-portrait
	Nature Slides	Birds; Open
	B&W / Color Prints	Nature; Open
Deadline:	**October 29** for all slides, entry forms for all categories, banquet reservations and fees.	

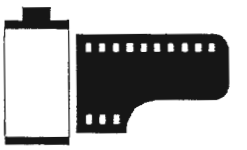
Entry forms were available at the past two camera club meetings. If you did not pick one up, call Jeff Tamms at 414/961-7114 right now!

BOARD MEETING THIS MONTH!

Officers and Board Members of the camera club are reminded that a meeting is scheduled for 7:15 pm Tuesday, November 8 at Denny's in Menomonee Falls. Hmmm... I wonder which type of pie I'll try this month.

HAVE YOU TRIED ANY EXISTING LIGHT PHOTOGRAPHY?

Last month's meeting emphasized using existing light to take photographs. We hope you bring photos and slides of your attempts at this facet of our hobby to our **December 6** meeting to share with other members, and discuss does and doesn't work.



To get you started, the table below gives some recommended exposures (shutter speed and aperture) for existing light photography. It's from Kodak's *Encyclopedia of Practical Photography*.

Picture Subject	Film Speed (ISO) 50-64	125-200	200-400	1000-1250
At home				
Home interiors at night:-with bright light †	1/15 f/2	1/30 f/2	1/30 f/2.8	1/60 f/4
- with average light †	1/4 f/2	1/15 f/2	1/30 f/2	1/20 f/4
Candlelight close-ups †	1/4 f/2	1/4 f/2.8	1/15 f/2	1/30 f/2.8
Indoor and outdoor Christmas lighting at night, Christmas trees	1 f/4	1 f/5.6	1/15 f/2	1/30 f/2.8
Outdoors at night				
Brightly lighted downtown street scenes (wet streets add interesting reflections)	1/30 f/2	1/30 f/2.8	1/60 f/2.8	1/125 f/4
Brightly lighted nightclub or theater districts - Las Vegas or Times Square	1/30 f/2.8	1/30 f/4	1/60 f/4	1/125 f/5.6
Neon signs and other lighted signs	1/30 f/4	1/60 f/4	1/125 f/4	1/125 f/8
Store windows	1/30 f/2.8	1/30 f/4	1/60 f/4	1/60 f/8
Floodlighted buildings, fountains, monuments	1 f/4	1/2 f/4	1/15 f/2	1/30 f/2.8
Skyline - distant view of lighted buildings at night	4 f/2.8	1 f/2	1 f/2.8	1 f/5.6
Skyline - 10 minutes after sunset	1/30 f/4	1/60 f/4	1/60 f/5.6	1/125 f/8
Fairs, amusement parks	1/15 f/2	1/30 f/2	1/30 f/2.8	1/60 f/4
Fireworks - displays on the ground	1/30 f/2.8	1/30 f/4	1/60 f/4	1/60 f/8
Fireworks - aerial displays (keep shutter open for several bursts)	f/8	f/11	f/16	f/32
Lightning (keep shutter open for one or two streaks of lightning)	f/5.6	f/8	f/11	f/22
Burning buildings, campfires, bonfires	1/30 f/2.8	1/30 f/4	1/60 f/4	1/125 f/5.6
Night football, baseball, racetracks †	1/30 f/2.8	1/60 f/2.8	1/125 2.8	1/250 f/4
Niagara Falls - white lights	15 f/5.6	8 f/5.6	4 f/5.6	4 f/11
- colored lights	30 f/5.6	15 f/5.6	8 f/5.6	4 f/8
- dark colored lights	30 f/4	30 f/5.6	15 f/5.6	4 f/5.6
Moonlighted - landscapes	30 f/2	15 f/2	8 f/2	4 f/2.8
Snow scenes	15 f/2	8 f/2	4 f/2	4 f/4
Indoors at public places				
Basketball, Hockey, Bowling †	1/30 f/2	1/60 f/2	1/125 f/2	1/125 f/4
Boxing, wrestling †	1/60 f/2	1/125 f/2	1/250 f/4	1/250 f/4
Stage shows - average †	1/30 f/2	1/30 f/2.8	1/60 f/2.8	1/60 f/5.6
- bright †	1/60 f/2.8	1/60 f/4	1/125 f/4	1/250 f/5.6
Circuses - floodlighted acts †	1/30 f/2	1/30 f/2.8	1/60 f/2.8	1/125 f/4
- spotlighted acts (carbon-arc) ‡	1/60 f/2.8	1/125 f/2.8	1/250 f/2.8	1/250 f/5.6
Ice shows - floodlighted acts †	1/30 f/2.8	1/60 f/2.8	1/125 f/2.8	1/250 f/4
- spotlighted acts (carbon-arc) ‡	1/60 f/2.8	1/125 f/2.8	1/250 f/2.8	1/250 f/5.6
Interiors with bright fluorescent light ‡	1/30 f/2.8	1/30 f/4	1/60 f/4	1/125 f/5.6
School - stage and auditorium †	-	1/15 f/2	1/30 f/2	1/30 f/4
Swimming pool - tungsten light indoors (above water) †	1/15 f/2	1/30 f/2	1/60 f/2	1/60 f/4
Church interiors - tungsten light †	1 f/5.6	1/15 f/2	1/30 f/2	1/30 f/4
Stained glass windows, daytime - from inside ‡	Use 3 stops more than for outdoor lighting conditions			
Glassware in windows, daytime - from inside ‡	Use 1 stop more than for the outdoor lighting conditions			

† For color pictures, use tungsten film for the most natural color rendition. You can also use daylight color film, but your pictures will look yellow-red.
‡ For color pictures, you can use either daylight or tungsten film. Daylight film will produce colors with a warmer, more yellowish look, Tungsten film produces colors with a colder, more bluish appearance.

will seem easy to experts, but there are a couple of trick questions, too. The answers are on page 3.

1. What is the relationship of f/16 at $^1/_{30}$ second and f/4 at $^1/_{500}$ second?

2. Does Caucasian skin reflect more or less light than the average photographic subject, and to what extent?

3. In photographing a black cat in a coal bin, you rely on the meter built into your camera and expose as it indicates. Will your picture be overexposed or underexposed?

4. What is the slowest shutter speed you should use when hand holding a 50-millimeter lens? A 200-millimeter lens?

5. Your exposure meter goes on the blink far from civilization. On a bright sunny day, with Kodachrome 64 in the camera, what is your best-guess exposure?

6. With Kodachrome 64 film, an exposure of 1 second a f/5.6 is the same as 1/2 second at f/5.6. True or false?

7. You're photographing a friend in the park. The light is coming from behind his face. In what direction and how much would you adjust exposure?

8. You're photographing two friends, one at 6 feet and one at 12 feet from the lens. Where would you focus to get the best possible sharpness in both subjects?

9. You take a series of pictures indoors, using transparency film. The processed slides look orange. What happened?

10. You're shooting close-ups of flowers. At one-to-one magnification (meaning that your subject will appear its actual size on film), how much more exposure is needed than when shooting at infinity?

11. The day is overcast and glum; you want to increase the contrast of your pictures by switching to another transparency film. Do you change to a higher or a lower speed film?

TIPS FOR BETTER PICTURES

In keeping with the theme of our upcoming camera club meeting, *Composition*, here's a short list from the May 1993 PSA Journal. Several of these tips address properly using composition to improve your photographs.

- Have fun. Photography is the world's number one hobby.
- Move in close. Fill the frame with the subject.
- For pictures of people, remember "faces are more interesting than feet."
- For candid shots, have camera prefocused and ready to shoot.
- For a candid portrait, use vertical format and move in close.
- With groups of people have them doing something, or looking into the center of the picture.
- Plan your picture. Keep it simple. Select a position to eliminate distracting objects.
- Have only one "center of interest," but don't center it.
- Don't center the horizon. Place it one third up or one third down.

Menomonee Falls Recreation Department

Camera Club

Vol. No. 190 - January 1995
Meetings first Tuesday of each month - 7:15 pm
Menomonee Falls North Middle School
N88 W16750 Garfield Drive

JANUARY 3, 1995 MEETING TOPIC: CAMERA FORMATS

The upcoming meeting of the Menomonee Falls Recreation Department Camera Club will feature a presentation on the various formats of cameras in use today. Most cameras in common use variously utilize rolls or cartridges of film 16 mm to 70 mm wide, or sheet films up to 8" x 10" in size. Special-purpose cameras use even narrower or wider rolls, or larger sheet sizes. Many cameras designed primarily for one size film can accept smaller sizes or produce a variety of picture formats by means of magazine or adapter backs and film holders.

WHY DIFFERENT CAMERA FORMATS?

Although there are plenty of reasons for different camera formats (portability, lens/film availability, etc.), the illustration of the sizes of film various cameras use (on page 4) shows one of the most important advantages large-format cameras have over the other types. Larger film means less enlargement is required, reducing the graininess of the final product.

Large-Format cameras. These cameras commonly use sheet films 10 x 12 cm (4" x 5") and larger. They are almost always bellows-type cameras, which allows them to accommodate the various focal length lenses required to cover the picture area. (A major exception is the aerial camera, which has a rigid-body design and uses roll film 5 or 9 inches wide. Because of their size and consequential their weight, almost all large-format cameras are used on a stand or tripod. However, there are some folding press-type cameras using 4" x 5" film that can be hand held.

Medium-Format Cameras. Most medium-format cameras use 120/220 or 70 mm roll film, or equivalent sizes of sheet film. They make pictures ranging in format from about 4.5 x 6 cm (1 $^{3}/_{4}$" x 2 $^{3}/_{4}$") to 6 x 9 cm (2 $^{1}/_{4}$" x 3 $^{1}/_{4}$"). The full range of body designs is available in this size - studio or technical bellows type, rigid-body and bellows-equipped waist- and eye-level viewing types, and folding press cameras. Only the studio or technical type must be used on a tripod or stand; the others may be hand-held under a variety of conditions, although their performance is extended and improved by the use of a tripod.

Small-Format Cameras. These cameras use 35 mm and smaller film sizes (126, 110, 16 mm are common) contained in magazines or cartridges. At a time when most cameras were medium- or large-format designs, small-format cameras were called miniature (35 mm size) and subminiature (16 mm size). Such terms are inaccurate and essentially meaningless today because of the variety of small film sizes and camera-body styles in use. Small-format cameras are physically small and relatively lightweight; many are truly pocket size. They are readily used hand-held, and require accessory support only when used at slow shutter speeds, with long-focal-length lenses, or heavy, bulky attachments.

TECHNICAL COLLEGE PHOTOGRAPHY COURSES

The following evening courses in photography will be offered at our local technical colleges:

WAUKESHA COUNTY TECHNICAL COLLEGE:

COURSE NO.	STARTS	ENDS	DAYS	TIME	PLACE	COST
Camcorder Creativity						
203-640-001	3/8	4/12	Wed.	6:30-8:30 pm	ANHS	$38.90
203-640-002	1/26	3/2	Thurs.	6:30-8:30 pm	PEW*	$38.90
Darkroom Techniques						
203-609-002	1/26	3/16	Thurs.	6:30-9:30 pm	WNHS	$66.15
Flash Photography						
203-621-002	2/15	2/15	Wed.	6:30-9:30 pm	PEW*	$12.35
Know Your Camera						
203-602-004	1/24	1/31	Tues.	7:00 - 9:00 pm	WNHS	$15.30
203-602-005	1/23	1/30	Mon.	7:00 - 9:00 pm	PEW*	$15.30
Nature and Wildlife Photography						
203-615-002	2/2	2/23	Thurs.	7:00 - 9:00 pm	PEW*	$39.70
35 mm Photography - Intro						
203-600-003	2/7	4/11	Tues.	7:00 - 9:00 pm	WNHS	$66.15

MILWAUKEE COUNTY TECHNICAL COLLEGE:

Fund. of Photography						
203-101-600	1/30	5/10	Mon. & Wed.	6:00 - 8:55 pm	MILW**	$187.50
View Camera Techniques♦						
203-106-600	1/26	5/4	Thur.	5:00 - 10:00 pm	MILW**	$187.50
Photo Lighting♦						
203-108-600	1/26	5/9	Tue. & Thur.	6:00 - 8:55 pm	MILW**	$187.50
Commercial Photography♦						
203-121-600	1/30	5/10	Mon. & Wed.	6:00 - 6:55 pm 6:00 - 9:55 pm	MILW**	$187.50
Adv. Studio Lighting						
203-126-600	1/31♦	5/11	Tues.	5:00 - 10:00 pm	MILW**	$187.50
Color Photography 2♦						
203-142-600	1/31	5/11	Tues. & Wed.	6:00 - 8:55 pm 5:00 - 8:55 pm	MILW**	$187.50
Basic Photography						
203-300-600	2/01	5/12	Wed.	6:30 - 9:25 pm	SOUTH	$125.00
203-300-601	1/30	5/10	Mon.	6:00 - 8:55 pm	MILW**	$125.00
Darkroom Techniques♦						
203-402-600	2/01	5/12	Wed.	6:30 - 9:25 pm	SOUTH	$84.40
203-402-601	1/30	5/10	Mon.	6:00 - 8:55 pm	MILW**	$84.40
Camera Tech/Amateur						
203-660-600	2/01	4/12	Wed.	6:30 - 9:20 pm	WAUW	$68.30

♦ A prerequisite is required to attend this class - contact MATC for details.

Class locations are ANHS-Arrowhead North H.S., North Ave., Hartland; MILW - Milwaukee Campus, 700 W. State St.; PEW-Pewaukee Campus, 800 Main Street; SOUTH - South Campus, 6665 S. Howell Ave.; WAUW - Wauwatosa Wauwatosa West H.S., 11400 W. Center St.; WNHS - Waukesha North H.S., 2222 Michigan Ave. You can register for WCTC classes by phone by calling 691-2910 (have social security number, date of birth, Mastercard/VISA number, and course number ready). For course information, call 691-5578 (WCTC) or 297-

7077 (MATC). WCTC tuition is 50% of the amount listed for senior citizens 62 years of age or older.

NEWSLETTER ARTICLES ARE WELCOME!

Menomonee Falls Camera Club members are encouraged to get items of interest to my attention for inclusion in our newsletter! If you come across something of interest get it to me, either at our monthly meetings, calling me at 251-8274 (home) or 359-2222 ext. 2042 (work), or mailing it to me at Mark Mathu, N83W13696 Fond du Lac Ave #41, Menomonee Falls WI 53051.

If space in future newsletter permits, I would like to include a few technical articles addressing questions I have overheard at our meetings. Specifically, I would like to have articles answering the questions 1) Why do special effect filters (star, etc.) produce more dramatic results when a smaller lens aperture is used? 2) Why do flash pictures sometimes produce a black background even though the background behind the subject is quite well-lit and cluttered when the picture is composed?

I have some ideas on these two topics, but I would much rather include an article from another writer -- not only for variety, but hopefully they are more informed than me!

If you have an answer to either of these questions, I would love to get a short -- the length of this article (200 words) is adequate -- explanation of the phenomenon.

PHOTO-FINISH PHOTOGRAPHY

[Editor's note - Here's an article about a unique camera format that we probably won't see at next month's meeting. The story of how a photo-finish camera works is quite interesting.]

The Photo-Finish Camera

There are several names for the photo-finish camera: It is called a slit camera because it photographs through a slit; a streak camera because objects standing still become streaked images on the film (although moving objects are recorded sharply); and a strip camera because it produces an image on a long strip of film. Probably "slit camera" is the most descriptive phrase.

The slit camera is neither a still nor a movie camera, but it shares some of the features of both. It provides a sharp, still image of moving subjects, and it uses moving film. However, the still picture records an unbroken succession of moments rather than a single, "frozen" instant, and it provides a single, continuous image rather than a series of separate frames.

The slit camera does not have a shutter; instead, a plate with a slit only about 0.25 mm (1/100 inch) wide is located between the lens and the film. Although the lens field may be wide enough to include an entire dog, the slit permits only a fraction of that image to reach the film at any one time. The slit is aligned exactly with the finish line, so that as a dog crosses the line, the tip of its nose is imaged through the slit first, then the rest of its nose and head, the neck, the shoulders, body, tail, and in turn, the following dogs.

If the film remained stationary, all these image bits would pile up on one another in the same narrow strip of film. But a precision electric drive in the camera moves the film past the slit at the same speed as the image of the dogs, typically 1 or 2 inches per second. In this way, each new part of the image passing through the slit falls on a different portion of the film. In effect, the combination of moving film and fixed slit "wipes" a continuous image onto the film. When finished, a photo-finish negative will be a strip of film about 2 feet long.

A photo-finish camera usually has a built-in exposure meter that relates lens apertures to various rates of film travel. An optical system in the camera exposes the track name, the date, and other information onto the edge of the film; this makes the

identification data a permanent part of each image. A mirror complex is installed on the far side of the track, directly opposite the camera lens so that two views are recorded on the film simultaneously, one from each side of the track.

The camera may also include a sophisticated electric timer that will expose elapsed times onto the film as the dogs finish. a lightproof take-up compartment for exposed film and a built-in film cutter make it possible to remove the exposed portion for processing immediately after each finish.

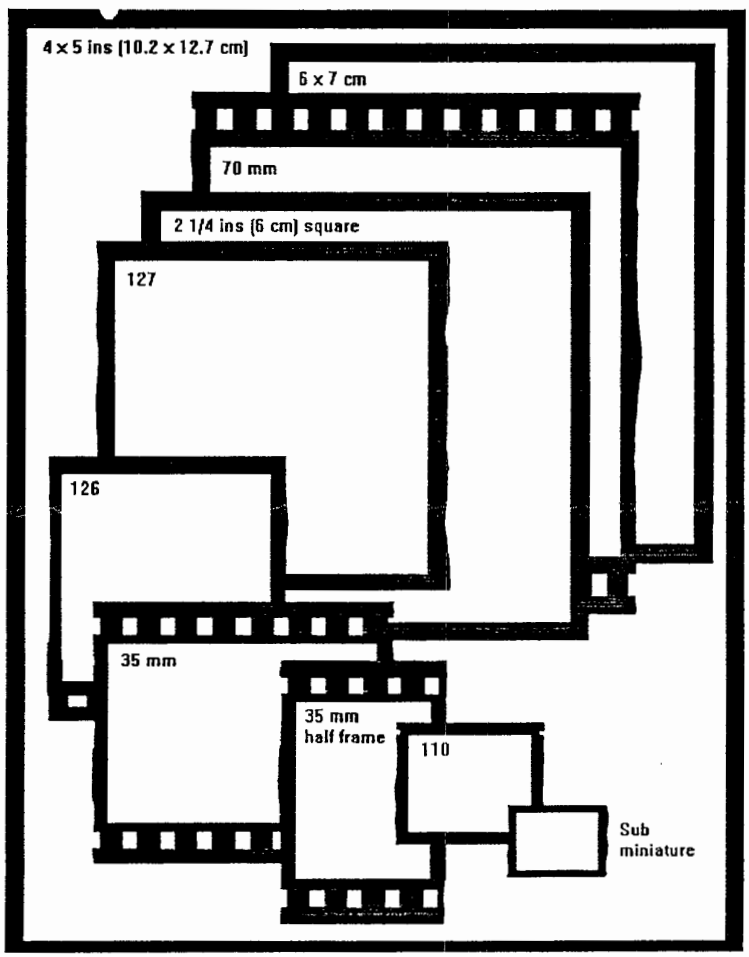
Slit-Camera Pictures

Considering how unusual the camera is, the most surprising characteristic of photo-finish pictures is that they look so much like conventional photographs. However, there are several important differences:

Perspective. There is no perspective from left to right; everything in the photograph is seen directly perpendicular to the lens axis. That is because each part of the greyhound is photographed only at the finish-line position. In a normal photograph only the part of the dog directly at the finish line would be seen along the lens axis; the rest would be seen at an angle either to the left or the right.

Background. The background is a series of parallel streaks running from side to side. These are paw prints, shadows, posts and railings, and all other stationary details on the racetrack. Because it is standing still, each light or dark subject area is stretched out into a streak by the film moving past the slit.

Distortion. The dogs may have distorted legs; in some cases the entire body may be distorted. The distortions occur because the body moves forward at a fairly constant speed-- matched by the film-- but the legs move back and forth. While they are moving backward, relative to the body and film movement, they will be distorted into a streak by the camera. Legs looking like this are called "rubber legs." If a contestant is moving much slower than usual, it will take a longer time to pass across the area covered by the slit, hence the image will be stretched out or lengthened. An especially fast dog will show just the opposite effect-- being unusually squeezed or compressed.



Finish Line. Since the finish line is stationary, it does not appear in the finished photograph. All parts of the picture are taken at the finish, so this doesn't matter. Every contestant in the photo is crossing the finish line, which means that every one of them has run the full distance. (In a conventional instantaneous photo, some would have not yet have finished while others would have passed the line.) When two dogs finish close together, a white vertical line may be added to the print during enlarging, in order to separate them. The line will be placed on the greyhound's nose. As long as it is accurate and vertical, this line can be placed at the required position on the print because each point is at the finish line.

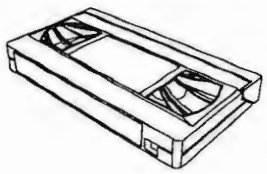
Menomonee Falls Recreation Department

Camera Club

Vol. No. 191 - February 1995
Meetings first Tuesday of each month - 7:15 pm
Menomonee Falls North Middle School
N88 W16750 Garfield Drive

Officers
President: Steve Haynes 251-3791
Treasurer: Bob Schwan 786-5449
Secretary: Jon Moscicki 464-6479
V.P. / Newsletter: Mark Mathu 251-8274

Board Members
Bill Rietz 251-7106
Jeff Klug 1-628-0555
Roger Crill 1-284-6627



PHOTOGRAPHING THE BRIDE

Join us at 7:15 pm Tuesday, February 7 at Menomonee Falls North Middle School for an interesting Monte Zucker video, *Photographing The Bride*. Monte Zucker is a nationally known wedding / portrait photographer. The video was recently purcahed by WACCO, the Wisconsin Area Camera Clubs Organization, and is on loan from them. The techniques taught in this video can be used at our March meeting, which will be a model shoot.

FILTER SYSTEMS

Club member Ken Cina, who gave an excellent presentation on polarizing filters at our October meeting, is back with an encore! This time, Ken will be speaking on camera filter systems.

ZOO PHOTO CONTEST

Just say "cheese"! Load up the camera for the Milwaukee County Zoo's annual photo contest, which runs from March 2 through April 2. The most exciting, unusual and realistic photos or videos taken at the Zoo will be awarded fantastic prizes. Focus, shoot, and good luck! Call 414/256-5412 for rules and details.

WACCO SPRING COMPETITION

The spring competition of the Wisconsin Area Camera Club Organization (WACCO) is being planned for early May! Topics for the competition are House of Worship, Food, Hand of Man, and Wild Animals. When more information is available on the competition and banquet, you know it will be posted in the newsletter. It's never too early to start planning your photos!

SEND ME YOUR IDEAS!

As newsletter editor, I encourage all members to send interesting photography news to my attention! Items can be mailed to me at N83W13696 Fond du Lac Av. #41, Menomonee Falls WI 53051-7252 (phone 414/251-8274), or fax them to my attention at 414/359-2310.

Wanted: Menomonee Falls Camera Club newsletters for 1993-94 (issues 176-185). If you have a set that I may borrow to get copied, please bring them to this month's meeting! - *Mark Mathu, editor*

ON THE TECHNICAL SIDE...

WHY DO SPECIAL EFFECT FILTERS WORK BETTER AT SMALLER APERTURES?

[Editor's note: At one of the past camera club meetings, I overheard this question being asked. This is my theory explaining the effect. Does it seem plausible?]

What's going on?

Many of us with 35mm SLR cameras have one or more special-effect filters, such as a colorburst filter, which relies on the principle of light diffraction to create the effect. At other times, we've had photos ruined (or sometimes enhanced!) by unwanted "star points" occurring at intense points of light in the picture, such as a street light. These effects, too, are caused by diffraction.

What is diffraction?

When radiant energy with wavelike properties, such as light, passes an obstruction with a cleanly defined thin edge, secondary waves are generated at the point of contact. The secondary waves spread outward, in the same overall direction of travel, into the shadow area behind the obstruction and into the path of the obstructed energy. This phenomenon is called diffraction.

The literature packed with special effect filters usually advises that the effect of the filter is usually enhanced at small apertures. Likewise, the "star points" at point sources of light are much more pronounced in exposures taken at smaller apertures.

Why is this?

The answer relies on simple optics to explain. In both examples given above, the special effects are caused by light that is diffracted at the edges of the diaphragm. The amount of light that is diffracted varies directly with the circumference of the diaphragm; if you halve the diameter of the diaphragm, half as much light is diffracted.

According to this, the diffraction effects should be less at smaller apertures than larger ones, right?

Not quite.

Although the amount of diffracted light is reduced when the diaphragm is closed, the total amount of light available for the photograph is reduced even more. Remember, halving the aperture lets in only one-fourth of the previous amount of light.

So, this makes the effect of the diffracted light more pronounced, relative to the total amount of light available for the scene.

For example...

Consider a night-time scene that is metered for an exposure of 1/2 second at f/2. This same scene could also taken at 8 seconds with f/8.

Using this second exposure the brightness of the image on the film is only 1/16 ($f/2^2 \div f/8^2 = 1/16$) of the first exposure; that's why we need an exposure that is 16 times longer than the first photo.

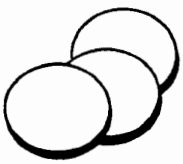
However, the amount of diffracted light reaching the film is only 1/4 of the previous amount ($f/2 \div f/8 = 1/4$), so the diffraction effects are 4 times ($1/4 \div 1/16 = 4$) more pronounced at f/8 than f/2. The effects are more noticeable when the diaphragm is stopped down even further.

Upcoming Camera Club Meetings:

March 7: Model Shoot
April 4: Auto-focus systems
May 2: *Open*
June 6: White elephant sale
July 27-30: South Western Michigan Camera Clubs (SWMCC) field trip

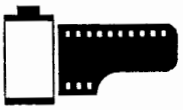
WHAT'S NEW IN PHOTOGRAPHY

[Editor's note: here's some short articles I gleaned from some recent photography magazines. If anyone checks out any of these products, I'd love to hear your comments!]



Filter Facts. Anyone wanting an at-a-glance overview of the imaging magic possible with photo filters could do worse than paging through the *B+W Filter Book*. With over 200 photos (most in color), the 52-page booklet examines the power of filters by means of informative with-and-without picture groupings. Both still and video photographers will find something of interest, including filters for black-and-white as well as infrared photography and detailed product descriptions of the entire B+W filter lineup. Cost, to cover postage and handling, is $3. Contact Schneider Corporation, 400 Crossways Park Dr., Woodbury NY 11797. (Popular Photography 12/94)

Agfa Film. Agfa has announced a whole new generation of color films. Agfacolor HDC (High Definition Color) color-print films in speeds of ISO 100, 200, and 400 incorporate a number of advanced-technology improvements, inter-image effects, triple masking and new emulsions with markedly reduced crystal sizes. The results: films with excellent definition and color separation, improved color saturation and purity, outstanding skin-tone rendition, and fine grain. Storage stability and processing latitude have also been improved. The new Agfachrome CTx 100 is a color-slide film with increased color intensity, improved definition and grain, and excellent reciprocity and push characteristics. There's also a new, improved Agfachrome CTx 200. Agfa Division of Miles, Inc., 100 Challenger Rd., Ridgefield Park NJ 07660, 201/440-2500. (PHOTOGraphic 12/94)



Fuji Film. Fuji introduced a new line of Fuji-color Super G Plus color-print films, in speeds of ISO 100, 200, 400, and 800. "Significantly enhanced" versions of Fuji's Super G films, the new line gives the consumer easier access to the great 800-speed film that was previously available only in 20-roll pro packs. The new films incorporate Fuji's RT (Real-Tone) Technology for optimum skin tones and ELS (Emulsion layer Stabilizing) Technology to minimize fluctuations in the quality of the film. The entire Fujicolor Super G Plus family shares the same printing characteristics. And Fujicolor Super G 800 pro film has been upgraded to Super G Plus status, available in 5- and 20- roll pro packs. Fuji Photo Film USA, Inc., 555 Taxter Rd., Elmsford NY 10523 800/659-3854 ext. 2571. (PHOTOGraphic 12/94)

Free Brochure. The Photography Information Council (PIC), dedicated to enhancing the joy of photography for people of all ages, is offering the easy-to-read, 16-page, full-color *365 Days To Take Great Pictures* for free. Basic info is for all types of cameras, including SLR's point-and-shoots, instant and single-use models. Topics featured are Vacation, Indoor, Snow, Zoo, Earth, School, and Game days. Tips cover choosing cameras, filters, films, and accessories. Call PIC at 800/599-5929. If you have a specific question on a photo technique, write PIC, P.O. Box 436, Dept. PPM, Montrose NY 10598-0436. (PHOTOGraphic 1/95)

WILDFLOWER PHOTO CONTEST AT PUBLIC MUSEUM

The Milwaukee Public Museum is sponsoring a photo contest! Each entrant may enter up to 3 slides in each of three categories - Macrophotography, Plant Close-ups, and Plants in the Landscape. In conjunction, Eastman Kodak Company is sponsoring a snapshot category. The entry fee is $3.00; seven cash awards will be given; entries must be postmarked by Monday April 3. For full details, contact the Milwaukee Public Museum, 800 West Wells St., Milwaukee WI 53233, phone 278-2700.

DETERMINING HYPERFOCAL DISTANCE

When a lens is focused at infinity, the distance beyond which all objects are in acceptable sharp focus is the hyperfocal distance. For example, if a 35mm lens is set at f/8 and focused at infinity, objects from 10 feet to infinity will look sharp. The hyperfocal distance for these conditions is therefore 10 feet.

If the lens is then refocused at the hyperfocal distance, 10 feet, objects from half the hyperfocal distance (5 feet) to infinity will appear in sharp focus. This gives the maximum possible depth of field for that aperture.

Many photographers waste depth of field without realizing it. In the example given, if the camera was focused at 50 feet instead of the hyperfocal distance for the f-stop in use, the depth of field would be from 8.4 feet to infinity, instead of from 5 feet to infinity. The result is a loss of about 3.4 feet of foreground sharpness.

When a lens is focused at infinity, the distance beyond which all objects are in satisfactory sharp focus is the hyperfocal distance. If you focus a lens on the hyperfocal distance, objects from half of the hyperfocal distance to infinity will appear in sharp focus.

Depth Of Field Scale

The hyperfocal distance is different for each f-stop setting of a given lens. The distance may easily be calculated for each aperture by using the formula given below. However, there is a quick way to focus at the hyperfocal distance for any f-stop if the lens barrel has a depth-of-field scale, as is the case with lenses for most 35mm and medium-format cameras. Set the infinity mark (∞) on the lens distance scale opposite the index mark for the f-stop in use at one side of the depth of field scale. The index mark for that same f-stop at the other side of the scale will point to the distance at which the depth of field begins — that is, to half the hyperfocal distance. And the focusing mark in the center of the scale will point to the hyperfocal distance itself.

Figuring Hyperfocal Distance

Depth-of-field scales and hyperfocal distances are somewhat arbitrary since they are based on an acceptable "circle of confusion." Any point in a scene that is closer or further away than the exact distance focused upon will register on the film as a small, blurred circle rather than a point. This blurred circle is called the circle of confusion. When these circles are small enough to appear as points, the subject looks sharp. But the farther a point in the scene is from the plane the camera is focused upon, the larger the circle of confusion becomes. When the circles become so large that the subject no longer appears sharp, it is no longer within the depth of field.

The formula for hyperfocal distance (near limit depth of field when the lens is set at infinity) is: $H = \frac{F^2}{f \times d}$, where H is the hyperfocal distance, F is the focal length of the lens, f is the f-number setting, and d is the diameter of the acceptable circle of confusion.

A recommended circle of confusion value is 0.05mm for 35mm film. For other formats, the circle of confusion is $0.001F$, where F is the focal length of the "normal" lens for that format.

Remember, if your focal length and circle of confusion values are in mm, the hyperfocal distance setting will be in mm also. To convert to feet, divide the result by 304.8.

For example, a 28mm lens at f/22 has a hyperfocal length of 2.34 feet (713mm). If the lens is focused at this distance, everything from half the hyperfocal length (1.17 feet) to infinity will be in acceptable focus.

Menomonee Falls Recreation Department

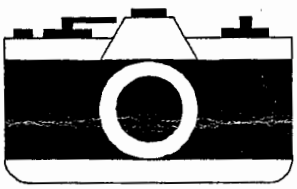
Camera Club

Vol. No. 192 - March 1995
Meetings first Tuesday of each month - 7:15 pm
Menomonee Falls North Middle School
N88 W16750 Garfield Drive

Officers
President: Steve Haynes 251-3791
Treasurer: Bob Schwan 786-5449
Secretary: Jon Moscicki 464-6479
V.P. / Newsletter: Mark Mathu 251-8274

Board Members
Bill Rietz 251-7106
Jeff Klug 1-628-0555
Roger Crill 1-284-6627

MARCH 7TH IS MODEL SHOOT!



Our March meeting will be a model shooting session! Through the generosity of some of our club members, there will be several lighting setups available for your use. These setups will be complete with studio lights, backgrounds, chairs, and posing tables. Many of the models from last year's session will be back for this year's event.

Club members should bring their camera (a lens with a 50 to 105mm focal length is recommended for portrait photography), 100-200 speed daylight film, and a tripod. Your camera will need a PC connection to connect to the studio lights. If your camera has a hot shoe only, a hot shoe / PC adapter is needed, or you can hope that someone at the meeting will have one that you can borrow.

The camera club thanks Bill Rietz for arranging the models and Jeff Klug, Steve Haynes, and Jon Moscicki for providing the studio equipment. The school will be open at 6:00 pm to allow time to set up the equipment; the actual sessions will start at our regular meeting time of 7:15.

For our April meeting, please bring in your favorite photographs from the session, either as slides or 4"x6" prints (5"x7" if you're feeling generous). You can share these with our members and perhaps select some to give to our models in appreciation for their assistance.

Pop Quiz: When you change the focus of your lens from 50 feet to 5 feet, does the front lens element move towards or away from the film plane?
(Answer on page 2)

WACCO SPRING COMPETITION

The annual spring competition of the Wisconsin Area Camera Clubs Organization (WACCO) will be held Saturday, May 6. Competition subjects are House of Worship, Food, Hand of Man, and Wild Animals. I'm still waiting for information and will forward it to you when I receive it.

In addition, WACCO will be sponsoring the Fourth International Exhibition of Photography on May 27. Awards and acceptances received by Photographic Society of America (PSA) members in this exhibition are eligible for PSA Star Ratings. The entry fee for this contest is $4.00 per slide; exhibitors from around the world usually enter this contest. There will be awards for *Best Image From a Wisconsin Maker* and *Highest Cumulative Score from a Wisconsin Maker.* Contact Jeff Tamms at 414/961-7114 for more info.

CAMERA CLUB PHOTO COMPETITION

Our June meeting will be a competition! Members of our camera club are encouraged to enter! The winners will be put on display at the Menomonee Falls Library in August, to coincide with the kick-off of our 1995-96 season.

Competition rules:

1. The competition is open to all members of the Menomonee Falls Camera Club. To enter, simply bring your photographs to the June 6 meeting.
2. Entries may be prints (minimum size 5" x 7"), or 2" x 2" slides.
3. All entries must be entered in one of the following two categories: "Menomonee Falls" - photographs depicting the village of Menomonee Falls; or "Open" - unlimited subject matter.
4. Each member may have a total of 6 entries, with a limit of no more than 4 entries in either category.
5. Entries will be judged by the members present at the June 6 meeting. Slides and prints will be judged separately.
6. Photographs that have won previous Menomonee Falls Camera Club competitions are not eligible for entry.

In conjunction with the June photo contest, Bill Rietz will be organizing a field trip to scenic points in Menomonee Falls. The trip is scheduled for the morning of Saturday, May 13. Bill will have more information available at an upcoming meeting.

UPCOMING CAMERA CLUB EVENTS...

April 4: Jeff Klug will give a quick demonstration of his collapsible blind, which he uses for wildlife photography. He picked it up at last year's SWMCC outing. The meeting will also feature a presentation on Nature Photography.

May 2: Meeting topic to be announced.

May 13: Menomonee Falls photography field trip.

June 6: The entries of our photography contest will be judged. In addition, we will have our annual white elephant sale.

July 27-30: Photo weekend sponsored by Southwestern Michigan Camera Clubs Organization (SWMCC), in Holland MI.

August 1-31: Winners of the photography contest on display in the Menomonee Falls library.

September 5: First meeting of the 1995-96 season.

Pop Quiz Answer:
As you focus *closer*, the lens element moves *away* from the film plane. Were you able to answer that one without checking your camera?

ZOO PHOTO CONTEST CANCELED

Ed Kolinski reports that the Milwaukee County Zoo photo contest, scheduled for this March, has been canceled due to lack of interest. Oh well, you still have the Public Museum's wildflower competition and our club's own contest. Information on both is in this newsletter.

Menomonee Falls Recreation Department

Camera Club

Vol. No. 193 - April 1995
Meetings first Tuesday of each month - 7:15 pm
Menomonee Falls North Middle School
N88 W16750 Garfield Drive

Officers
President: Steve Haynes 251-3791
Treasurer: Bob Schwan 786-5449
Secretary: Jon Moscicki 464-6479
V.P. / Newsletter: Mark Mathu 251-8274

Board Members
Bill Rietz 251-7106
Jeff Klug 1-628-0555
Roger Crill 1-284-6627

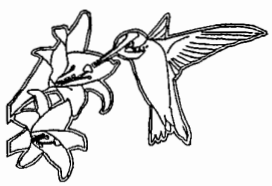
WILDFLOWER PHOTOGRAPHY

Please join us on Tuesday, April 4 for our monthly meeting. This month's topic is Spring Wildflowers and Close-Up Photograhy. Please bring your questions and ideas on this subject to the meeting.

BRING YOUR MODEL PHOTOS!

Members who participated in last month's model shoot are encouraged to bring their slides and photos to the meeting, to share with other members. Perhaps you may want to consider bringing copies of your best shots to give to the models — as a "thank you" for their assistance.

COLLAPSIBLE BIRD BLIND



In addition, Jeff Klug has promised a quick demonstration of his the collapsible blind, which he uses for wildlife photography. He picked it up at last year's Southwestern Michigan Camera Club outing.

SHUTTER SPEEDS TO FREEZE MOVEMENT

The chart on the right indicates the slowest shutter speeds that will stop the movement across the frame of some common moving subjects. A lot depends upon the subject's distance from the camera-- the speeds given here are for subjects at a distance that makes them fill the frame of a 35mm camera, held horizontally. Subjects further away will need slightly slower speed.

If the subject is moving at an angle toward or away from you, the minimum speed can be reduced by one stop; if it is moving directly toward or away, the minimum can be reduced by two stops. Bear in mind that a host of other factors can affect sharpness, including the focal length of your lens and your distance from the subject.

[From How To Catch The Action, Kodak Limited, Mitchell Beazley Publishers, Salvat Editores, S.A. 1983.]

Child sprinting	1/250
Adult sprinting	1/250
Car at 40 mph	1/500
Car at 80 mph	1/1000
Fast racing car	1/2000
Tennis serve	1/1000
Tennis stroke	1/500
Snow Skier	1/1000
Water skier	1/500
Skateboarder	1/500
Cyclist	1/500
Swimmer	1/125
Diver	1/1000
Trotting horse	1/250
Galloping horse	1/1000

HISTORICALLY SPEAKING

Did you know that many good things for the photographer were produced during the World War II years? One of the most popular contributions of that era was Ektachrome transparency film that was developed (excuse the pun) during the war for use by various branches of the armed forces. Another less popular color film was improved during the war years. The film was Dufaycolor, which never reached universal popularity. The film was mechanically complex, operating by virtue of light passing through a fine grid of red, blue, and green filter to form the image.

Ansco, later known as GAF, also contributed color films that could be processed in the home darkroom. In addition to Anscochrome, in 1946 Ansco marketed Color Printon for making color prints from transparencies. Included with the film were formulae for the processing chemistry for the convenience of serious hobbyists. Also in 1946, Pavelle, a new York photo processing company, set up an automatic system capable of printing more than twenty thousand color prints per day on the Printon product.

Photography contributions during the war years were not limited to photographic materials. Several noteworthy items of hardware made their appearance as a result of the war. Several of the cameras discontinued for the war effort were put back into production. The most notable of these was the Argus C3 which remained in production longer than any similar product. Twin lens reflex cameras made a strong entry in 1946, with several companies contributing at least one model of the one-above-one lens variety. Probably the most important hardware contribution was the Stereo Realist stereo camera. This camera was equipped with a pair of matched 3.5 lenses and it is still popular and in use by many stereo photographers today.

One of the most useful, if not most important, photographic devices of the era has to be the electronic flash. Mercury vapor flash, the forerunner of electronic flash as we know it, was demonstrated in 1930. The late Dr. Harold E. Edgerton invented the high speed strobe before World War II. During the war he developed a high power flash system used to make aerial photographs from planes flying nearly two miles high. It was the work of Dr. Edgerton, before, during, and after World War II that made modern electronic flash possible. That was indeed a wonderful product of the war!

UPCOMING CAMERA CLUB EVENTS...

May 2: Meeting topic to be announced.

May 13: Menomonee Falls photography field trip.

June 6: The entries of our photography contest will be judged. Categories are "Monomonee Falls" and "open". Rules are in the March newsletter, or call Mark Mathu at the number on page 1. In addition, we will have our annual white elephant sale.

July 27-30: Photo weekend sponsored by Southwestern Michigan Camera Clubs Organization (SWMCC), in Holland MI.

August 1-31: Winners of the photography contest on display in the Menomonee Falls library.

September 5: First meeting of the 1995-96 season.

Menomonee Falls Recreation Department

Camera Club

Vol. No. 194 - May 1995

Meetings first Tuesday of each month - 7:15 pm

Menomonee Falls North Middle School
N88 W16750 Garfield Drive

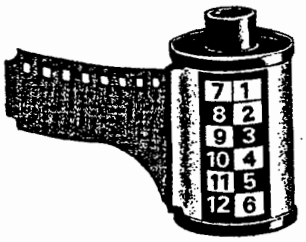
MAY MEETING

Our next camera club meeting will be held at 7:15, May 2, at Menomonee Falls North Middle School.

This month will be an "open" meeting, so please bring any items (both photographs and equipment) that you would like to share with the membership.

In addition, we will feature the winning entries from the 1993 Wisconsin International Salon, courtesy of the Wisconsin Area Camera Clubs Organization. This will be an excellent opportunity to view the works of others and perhaps come up with some ideas to enhance your photography skills.

Did you know:



Checkerboard squares on the sides of 35mm film cartridges comprise the DX coding system. Squares 2 to 6 tell the camera what the film's speed is; 8 to 10 the film's length, and 11 to 12 cue in the film type. Squares 1 and 7 are silver electrical contacts.

SPRING PHOTO PROJECT / FIELD TRIP

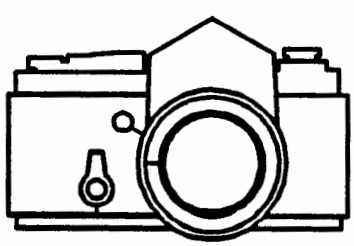
A Menomonee Falls Camera Club field trip is scheduled for Saturday, May 13! The object of the field trip is to take pictures in Menomonee Falls that can be used in our scheduled August library exhibit. At our June 6 meeting members will select approximately 25 prints to be exhibited.

Meet at the North Middle School, N88 W16750 Garfield Drive, north parking lot (off of Main Street) at 8:30 am, Saturday, May 13.

Photo Rules:

- Pictures must be taken in the village of Menomonee Falls
- Pictures taken other than on the field trip are eligible if taken in Menomonee Falls between January 1995 and June 1995.
- Pictures submitted must be color and/or black-and-white prints.
- Prints may be any size up to 16" by 20".
- All prints must be mounted. Mounts and/or matt size not to exceed 16" by 20". No framed prints will be accepted.

NONCREDIT PHOTOGRAPHY CLASSES



The next page lists the classes that will be offered during the summer months at Waukesha County Technical College (WCTC) and the University of Wisconsin Center - Waukesha

County (UWW). Field trips require lodging, travel, and meal expenses to be paid by the student, and will be held rain or shine. Registration forms and complete details about the class are available at the Menomonee Falls Public Library.

CLASS	DESCRIPTION	SCHOOL	CLASS DATES & TIMES	COST
Wildflower Photography	Covers natural lighting and flash, includes field trip	UWW	5/8 (7:00-9:00 pm), 5/13 (8:00 am-noon), 5/22 (6:30-9:30 pm)	$45.00
Waterfalls Field Trip	Trip to Upper Michigan	UWW	6/21 (7:00-8:00 pm), 6/23-6/25 (all day), 6/28 (6:30-9:30 pm)	$80.00
Know Your Camera	Basic camera fundamentals	WCTC	7/11(7:00-9:00 pm),7/13 (7-9pm)	$15.70
Scenic And Landscape Photography Field Trip	Trip to western Wisconsin and eastern Iowa	UWW	7/17 (7:00-8:30 pm), 7/22-7/23 (all day), 7/31 (6:30-9:30 pm)	$60.00
Lake Superior Shoreline Field Trip	Waterfalls and lighthouses in Minnesota	UWW	8/15 (7:00-8:30 pm), 8/17-8/20 (all day), 8/23 (6:30-9:30 pm)	$100.00

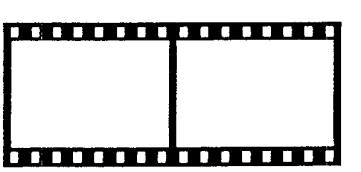
WHAT'S NEW IN PHOTOGRAPHY?

[Editor's note: Here's some short articles I gleaned from various sources. If anyone checks out any of these products, I'd love to hear your comments!]

Computer Photos: Microsoft Corporation has announced a service to transfer your pictures into a screen saver for your PC. Send your 35mm print film, or up to 12 negatives, slides or prints and they'll scan them onto a disk or photo CD. You also receive a copy of Microsoft Scenes screen saver and complete installation instructions. Cost is $24.95 for a 3.5" floppy, $29.95 for a photo CD. Computer system requirements: MS-DOS 3.1 or later, MS-Windows 3.1 or later, 386 or higher processor, 2 MB RAM, 3.5" HD disk drive, 3 MB disk space, 256 color super VGA monitor required. (Information available from Mike Crivello's, 13975 Capitol Drive)

Talking Camera: Polaroid's new OneStep Talking Camera is designed to catch subjects off-guard with built-in comic phrases or messages you create. A revolutionary single-chip voice record-playback feature enables you to playback one of three comic messages or to record "anything you can possibly say in under 8 seconds." The voice feature is powered by the battery in the Polaroid 600 High Definition Instant color-film pack. To record a message, you simply press the record button and speak into the microphone; to play back, just press the shutter button halfway and wait for the amused reaction. You can also deactivate the voice feature and use the camera as a traditional OneStep—which Polaroid identifies as the world's best-selling camera, instant or otherwise. The OneStep Talking Camera carries a list price of $39.95. (Peterson's PHOTOGraphic, 5/95)

Kodak Update: Increased investment in digital imaging, advertising, and the targeting of lesser-developed countries will fuel sales growth at Eastman Kodak Company. Also, new product development is crucial for Kodak to protect its core film business from private-label predators. By teaming with Fuji, Canon, Minolta, and Nikon to develop a new standard for film, to be released next April, Kodak's products will fetch higher prices. And where the company can't beat private-label brands, it'll join them. Kodak is now producing private label film for a Japanese retailer, which in turn also agreed to sell the company's branded film. This is the first time Kodak has manufactured private-label film.



COMPOSITION BASICS

Manny Katz, art director and instructor at Reseda Adult Education's successful photography program (Reseda, California), offers these ten guidelines for better photographs:

♦ The biggest problem with beginner's compositions is the ***"Bull's-eye" syndrome***— everything dead center in the frame. This practice leads to dull, static compositions that all look alike. Probably the main reason for this is that the camera's focusing prism is guess where? Dead center!

♦ ***Think of the image frame as a grid*** divided into thirds vertically and horizontally. Where the lines intersect is a good spot for your center of interest. The rule of thirds applies to vertical or horizontal compositions.

♦ Once you've found your center of interest, start eliminating distracting elements from the scene. ***Mentally trace around your subject and analyze the things surrounding it,*** such as branches, telephone poles, chairs. Don't forget to use your depth-of-field preview button. You can control some of these distractions by opening up your aperture and letting the background blur.

♦ Remember that ***your main point of interest should stand out from the background.*** If you have a light subject, try to shoot it against a dark background, and vice versa. The eye will naturally seek the brightest and sharpest area of a picture, so make that your center of interest. Keep in mind that the foreground can enhance the main subject and—if at all possible—should lead the viewer's eye *into* the photograph, not distract from it.

♦ ***Move in close***, fill the frame, and eliminate everything from the viewfinder that does not enhance your subject.

♦ When looking through the viewfinder, ***be aware of the lines and curves*** you see in the composition. Leading lines enhance the main compositional theme of the photograph. The S curve is among the most pleasing compositional lines. Vertical lines tend to be dignified with a feeling of strength. Diagonal lines signal movement and speed. Curves portray serenity and romance. And converging parallels give depth.

♦ ***Don't forget framing***. When shooting scenics, for example, try to include some foliage at the top or the side of your camera position, even if you have to have someone out of camera range hold a branch for you. Generally these "frames" will be in soft focus to increase the illusion of depth.

♦ When shooting buildings or monuments, try to ***include people*** in the scene for scale and interest.

♦ When shooting action photos of moving subjects, always ***leave more space in front*** of the moving subject. This implies movement and direction and gives the subject room to enter the frame. The same holds true for portraits. There should be more room in front of the face than behind it, or the photo will appear off balance.

♦ When photographing a group of subjects, it is usually best to ***use and odd number*** of them. Even numbers tend to look static; odd numbers are easier to group or arrange.

[From Developing The Creative Edge In Photography, by Bert Eifer, Writer's Digest Books, 1984.]

Pop Quiz Answer:

"Kodak" does not mean anything— George Eastman chose the name because it would be easy to pronounce in almost any language.

STAR TRAILS AND METEOR SHOWERS

[Here's and article about something I've wanted to try for several years; maybe I'll finally do it this summer! If anyone tries this, I'd be interested in seeing your pictures at an upcoming meeting. From the Encyclopedia of Practical Photography, by Eastman Kodak Company and the American Photographic Book Publishing Company, 1977]

Star trails are good subjects for your first astronomical picture-taking experience because they are so easy to photograph. Stars do not remain stationary in the sky. The appear to rise and set because of the rotation of the earth. When you take time exposures of stars, you will discover that stars create interesting effects, called "star trails," on your film.

Load your camera with a fast film. Open the camera lens to its maximum opening and set the focus at infinity. With your camera on a tripod, aim it toward a group of stars and open the shutter for a 4-minute exposure. At the end of the exposure, close the shutter, reduce the lens opening by 1 stop, and wait for 1 minute. Then make another 4-minute exposure on the same frame or piece of film, if possible. Continue this procedure, making a series of exposures ending at f/16.

After your film has been processed, you will find that the stars have been recorded as a series of streaks, or star trails. From these star trails you can determine the best exposure. If the trails are needle-sharp, you know that your lens is in sharp focus at the infinity setting. If the trails are straight and not jagged, you know that your camera support is sufficiently rigid.

You can use longer exposures and get the best pictures on dark, moonless nights away from the bright lights of cities. Moonlight and city lights produce a general background light in the night sky. This skylight limits the maximum exposure time that you can use without overexposing the background areas of your pictures.

Be sure to keep the camera lens free of dew from the night air. A lens cap is helpful in keeping dew off the lens between exposures. If you don't have a lens cap, you can make one from cardboard. When dew gets on the lens, wipe the lens surface with a clean, soft, lintless cloth or lens tissue, such as Kodak lens cleaning paper. However, don't clean the lens while you're making an exposure.

Photographing meteors is a challenge and takes a great deal of patience. The position of meteors in the sky is unpredictable; they appear in all parts of the sky. You can take pictures of meteors in the same way as you photograph star trails.

Meteors vary greatly in brightness and frequently in color. These small bits of matter enter our atmosphere at about 25 miles per second, and they are only 50 to 70 miles above the earth's surface.

On a clear, dark night away from city lights, you may see about 5 to 10 meteors an hour. They occur more frequently after midnight and are more common in the second half of the year. Dark, moonless nights are best for observing and photographing meteors.

There are certain periods of the year when meteor showers occur. The showers may last for several hours or a few days, but each meteor will be visible for only a few moments. If you find out when meteor showers are due and where to look in the sky, you may have a chance to photograph them. When a spectacular meteor shower is expected, your local newspaper may publish the date in advance.

[New moons this summer: May 29, June 27, July 27, August 26, September 24. Major meteor showers are the Delta Aquarids, July 26-31, and the Perseids, August 9-15. Consult any amateur astronomy book at the library to determine their location in the sky.]

Menomonee Falls Recreation Department

Camera Club

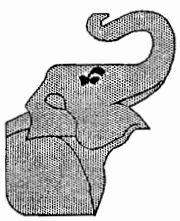
Vol. No. 195 - June 1995
Meetings first Tuesday of each month - 7:15 pm
Menomonee Falls North Middle School
N88 W16750 Garfield Drive

Officers
President: Steve Haynes 251-3791
Treasurer: Bob Schwan 786-5449
Secretary: Jon Moscicki 464-6479
V.P. / Newsletter: Mark Mathu 251-8274

Board Members
Bill Rietz 251-7106
Jeff Klug 1-628-0555
Roger Crill 1-284-6627

PHOTO JUDGING AT JUNE MEETING

Please join us on Tuesday, June 6 for the final meeting of the 1994-95 year. Members present will be judging the entries of the spring photography project, which was to take pictures in Menomonee Falls that can be used in our August exhibit at the Maude Shunk library. If you have photographs to be entered, please bring them along. Each person may enter up to a total of six color and/or black-and-white photos.



We'll also conduct our annual "white elephant" sale—bring your wallet or check book along with any photography equipment that you would like to sell. This has been a very popular way for club members to sell items to people that would be interested in them. Mark the prices on the items or have a data list. Negotiating is permitted. Bring cameras, lenses, tripods, bags, filters, flashes, and gadgets. All items are sold "as is." *[I'm hoping that Jeff Klug has grown tired of the 200-400mm lens that he demonstrated at the April meeting and will be selling it at a discount! - Editor]*

Are you interested in holding an elected position in the camera club? We will hold elections for all positions at this meeting. Remember, our club is run by volunteers—we all must participate to make it work!

WEEKEND OF PHOTOGRAPHY IN MICHIGAN

This summer, as in past years, some of our members will be car pooling to the Southwestern Michigan Camera Club's *Summer Weekend of Photography*, held at Hope College, Holland MI, July 27-30, 1995. No matter what your current level of skill and knowledge or what equipment you have, this weekend will provide an opportunity to avail yourself of valuable knowledge, interesting photographic opportunities, good fellowship, and a trade show. The entire program, including classes, 6 meals, and 3 night's lodging, begins at under $170! Car pooling arrangements will be worked out at our June meeting; if you can't attend, call Steve Haynes at 251-3791 for the details.

AU REVOIR, ARRIVEDERCI, AUF WIEDERSEHEN, ETC., ETC.

This is the last newsletter of the 1994-95 year. Our first meeting in the fall will be Tuesday, September 5, at the North Middle School. Mark your calendar today, and have a great (and photogenic) summer!

AUGUST LIBRARY EXHIBIT

Don't forget to stop by the Maude Shunk Library, W156 N8446 Pilgrim Rd during the month of August to see our exhibit! While your there, you might want to check out some photography books—from "how-to" books, to picture books by the photography masters; to periodicals such as Popular Photography.

PHOTOGRAPHY WORKSHOPS

Does the lack of Menomonee Falls Camera Club meetings during the summer months get you down? Well, fret no longer! Here are a couple of photography events scheduled for the upcoming months!

Adventures Unlimited, a Brookfield rock-climbing supply store, will host *Outdoor Photography With Gary Bakic* at 7:00 pm Wednesday, July 19. Join ace photographer Gary Bakic of Mike Crivello's Foto Factory to explore the ins and outs of outdoor photography. He'll discuss cameras, lenses, filters, tripods, and outdoor photo lighting and composition. Don't miss this one; Gary does a great clinic. Contact Adventures Unlimited, 14165 West Capitol Drive, at 781-8892. The best part: its free!

North American Photography Workshops, Ltd., Oconomowoc, offers a series of one-day field trips this summer. All workshops will be held in Waukesha County; they will begin at the Ottawa House Gallery, Oconomowoc, at 9:00 am and go until 4:00 pm. Contact Larry Michael, North American Photography Workshops, W349 S1448 Waterville Rd, Oconomowoc at 414/965-3344 or 414/569-1011.

- *Native Prairie Wildflower Workshop:* Two excellent native prairie sites offer exceptional opportunities to photograph native wildflowers and forbs peaking at this time of year. You will enjoy access to some of the finest remnant and restored native prairie landscapes in southeastern Wisconsin. Bring wide-angle, macro, and telephoto lens. This July time slot is the best opportunity for full bloom native prairie species. Saturday, July 15; fee $55.

- *Fall Colors And Old World Wisconsin:* This outstanding historical site near Eagle offers excellent fall color opportunities along with historic farm settings. This highly photogenic living museum is situated on 600 acres of beautiful Kettle Moraine landscape. Nature photography as well as historical farms and period-costumed people are abundantly presented. Sunday, October 8; fee $55.

- *Llama Trek / Fall Color Workshop:* You will hike the autumn trails, enjoy a gourmet luncheon, and photograph the fall colors. In addition to the photo workshop leader, you will be hosted by Nancy Frank of Opportunity Llama Treks. Photographic opportunities include the fall colors, spunky llama, and scenics of southeastern Wisconsin. Sunday, October 14; fee $75.

POP QUIZ:

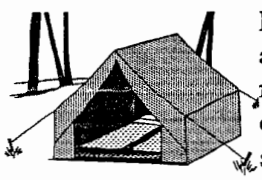
What does "Kodak" mean, and in what language?

(Answer on page 3)

PICTURE-PERFECT VACATIONS FOR SHUTTERBUGS

If your snapshots are too dark, too light, out of focus or otherwise disappointing, you may be a great candidate for a different type of vacation: a photography workshop or tour.

Summer and fall are prime times for shutterbugs. Wherever you go, you can probably find a class or a tour to help you bring home better photos.



Many national parks and mountain resorts offer short excursions into scenic areas led by photo experts.

Nonprofit groups, such as the National Audobon Society, the Appalachian Mountain Club, and Earthwatch, sponsor a variety of photography programs.

You can usually find good underwater photography courses in resort areas near spectacular reefs.

For more intense instruction, check with local colleges or full-service camera stores for extended workshops and seminars. Or sign up for a full-fledged photography vacation. Several tour operators offer trips to wildlife areas and photogenic places around the globe.

An investment in instruction can pay off not only with better photos, but with an increased enjoyment of the area you visit.

"The real allure of photo tours is that you're traveling with someone who is knowledgeable, someone who knows the area well," said Rick Vanselo, manager of Joseph Van Os Photo Safaris. "Even amateurs can tap into that expertise in the field."

Depending upon which tour you choose, you may get one-on-one instruction from the world's leading photographers.

Dedicated photo tours are also scheduled for the best lighting and timing.

"We go see brown bears when they're fishing for salmon," Vanselow said. "We see polar bears when they're migrating. Our Taj Mahal tour is set up so you'll see it in the morning when the light is best and there aren't so many people milling around. You aren't rushed from place to place. You can take time to get the right angle and the right shot."

Before you go, make sure the workshop is geared toward your experience level and your equipment. For wildlife photography, you'll probably need a long lens and fast film. But don't buy extra equipment until you talk to the tour director.

Here's a sampling of tours and workshops around the US and the world. Prices are per person, double occupancy, for lodging, land travel, meals, and activities:

•Abercrombie & Kent (800/323-7308) sponsors a tour to Antarctica, the Falklands, and the South Georgia Islands Dec. 3-21. George Lepp, field editor of Outdoor Photography magazine, is the instructor. Prices vary depending upon your cabin aboard the Explorer cruise ship. Expect to pay between $7,595 and $12,595 per person, excluding airfare.

•Holbrook Travel (800/451-7111), a natural history tour operator, is now booking a Patagonia tour from Oct. 21 to Nov. 5 for $3,997. It's led by Tom Ulrich, the 1987 International Wildlife Photographer of the year. A tour with Ulrich to Costa Rica, Mar. 9-21 is $1997. A Galapagos tour Mar. 23 to Apr. 2 is $2,247, including some airfare.

• Project Ocean Search (805/899-8899) has two expeditions this fall led by Jean-Michel Cousteau, son of Jaques Cousteau. The emphasis is on underwater photography for certified scuba divers. Nikonos camera equipment and daily on-site film processing are included. The first trip is Sept. 2-14 on Cayman Brac in the Cayman Islands for $3,950 per person. The price includes airfare from Miami, lodging, meals, and activities. Another trip, Oct. 26 to Nov. 9, in Savusavu, Fiji, with lodging at the new Cousteau Fiji Islands Resort, costs $5,200 per person. That includes airfare from Los Angeles.

Natural Photography (800/574-2839) leads photographers to moose, elk, and buffalo. The cost is $1,200 per person for a week's lodging in cabins set on the border of Yellowstone and the Tetons.

• Zone IV Workshop (802/365-7248), held at Vermont's Marlboro College, is for serious photographers only. Instruction covers negative exposure and printing theory. Plus you'll get individual critiques and excursions into scenic countryside for $985.

• Nature Images (407/586-7332) of West Palm Beach, Fla., has wildlife tours ranging from a four-day Everglades trip for $295 to a Costa Rica tour for $2,200.

• Alaska Photo Tours (800/799-3051) has customized programs with an emphasis on field work in wilderness settings. Two specialized tours are Orcas of Kenjai Fjords, Aug. 31 to Sept. 10, for $3,695 and Autumn Katmai Brown Bears, Sept. 9-15, for $1,995. Enrollment is limited to 10 so tours can offer one-on-one instruction at all times.

• Arizona Highways Photo Workshops (602/271-5904) are held year-round in Arizona's scenic canyons, for prices ranging from $500 to $2,000.

• Joseph Van Os Photo Safaris (206/463-5383) are ongoing, ranging throughout the world. A tour from Sept. 20 to Oct. 4, covers Botswana. The price is $5,195. A Maine Coast tour runs October 7-15 for $1,995. Tours for 1996 include Tanzania, Japan, India, Indonesia, China, Scotland, Kenya, and Papau New Guinea. In addition, Masters Photographers Weekends and various photography workshops will be held throughout the US this year.

WACCO Competition Categories for 1996-97:

Spring 1996: Gargoyles and Exterior Building Adornments; Silhouettes; Zoo; Fungi / Mushroom

Fall 1996: Arches and Columns; Antiques / Collectibles; Sports; Wild Flowers

Spring 1997: Faces in Inanimate Objects; Lighthouses; Bridges; Birds

ADVANCED PHOTO SYSTEM COMING IN 1996

The rumors started almost 5 years ago. Sparked by an article in a Japanese journal (Camerart), many in the photographic industry got their first hint that a major new film format was about to emerge. Would it be smaller? Electronic? a Hybrid? What kind of space-age camera might emerge? What new features might be possible? Would everything we already own be obsolete?

In March 1992 five companies (Canon Inc., Eastman Kodak Company, Fuji Photo Film Co. Ltd., Minolta Camera Co., Ltd. and Nikon Corporation) quietly announced their intention to begin a cooperative research project. The goal — *to investigate options for advanced silver-halide photographic systems that could provide enhanced benefits and flexibility of use, and to enable the addition of desirable features as the project proceeds.*

In February 1994 other photographic manufacturers were advised that they could obtain licenses to make products compatible with the new system.

The details of the system are still some of the most closely guarded in the industry, but as the introduction of Advanced Photo System (APS) Cameras seems likely at the Photo Marketing Association show this winter in Las Vegas, some 'official' information is finally available.

The basis of the APS is a new cartridge loaded with film. While the film types should be similar to today's emulsions, the base is made from a stronger, thinner material (polyethylene naphthalate) which is claimed to resist curling. This should keep the negatives flatter during printing.

The film is 24mm wide with an image area of 16.7 mm X 30.2 mm. 15, 25 and 40 exposure rolls planned. The film has a magnetic coating (but as of this writing, I'm not sure if the entire surface is coated with a clear magnetic surface -ala Kodak DataCode used in motion picture editing, or if just the edges are striped.)

On the leader, the camera can record general information about the roll, such as a title and/or the model of camera being used. For each frame a title, date, aspect ratio, and exposure data can be recorded.

When you get your film back from the lab, you should also get an index print– a small print with thumbnail pictures showing the photos from each frame on the roll. The index print, similar to the ones you get when you have a Photo-CD made, will also show printed information obtained from the optical and magnetic data encoded on the film.

Highlights of the APS system include:

- Drop-in Loading. A sealed cartridge will be dropped into the camera. Once inside, the film will be extracted and loaded for shooting. Shooting without the film advancing should be a thing of the past.

- Multiple Picture Sizes. Actually three different croppings of the same negative, for different aspect ratios ranging from classic 35mm to panoramic.

- Smaller Cameras (and lenses). Since the film is smaller, the cameras can be made smaller. Also lenses would be smaller and lighter than similar power lenses for 35mm.

- Enhanced Backprinting. Magnetic encoding allows a host of information to be stored without effecting the image. This data can be printed below the image or on the back of each print. Date, time, captions, or even camera settings may be available (depending on the camera model).

- Improved Picture Quality. According to the manufacturers, recording information about the picture taking conditions on the magnetic portion of the film and relaying that to the photofinisher will allow the photofinisher to make adjustments in processing to enhance picture quality.

- Storage and Retrieval System. At no time does the film ever come into contact with the consumer's hands. The cartridge is used for storage. A clever coding system lets you know if a cartridge is unused, partially used, exposed but not processed, or contains a processed roll. Each cartridge is numbered and that number is printed on the index print that you'll get back from the lab.

- Pathway(s) to the Future. This one's a bit fuzzy, but the manufacturer's claim that the magnetic encoding can make possible many innovations in the way we access and use photographs in the future.

The Advanced Photo System appears to offer great advantages for the photofinisher. For the consumer, it holds the promise of even smaller, lighter cameras and lenses, and less chance of missing an important shot. Will APS live up to these promises?

The official word is that the new APS products will co-exist with the current 35mm Cameras, films and accessories. But for how long? And will we see any really new developments in 35mm technology? ▯

MORE ON ELECTRONIC FLASH

Types of electronic flash:

An electronic flash unit is convenient to use because it allows you to take a little slice of daylight with you wherever you go. A single set of batteries will provide hundreds of exposures. Also, because the light from electronic flash is similar to daylight, you don't have to worry about color balance as long as you're using daylight films. As an added bonus, the burst of light from electronic flash is brief enough to halt almost any subject or camera motion.

There are three basic types of electronic flash units: manual, automatic, and dedicated. These three types of flash units differ from one another mainly in the way that they (or you) determine exposure. With manual flash units, you determine the proper lens opening for your camera based on the guide number for your flash unit and the film you're using, or from a calculator dial on the flash. Manual units are slower to use because each time you change flash-to-subject distance, you must also change your lens aperture.

Automatic flash units have a light sensor that measures the light reflected by the subject from the flash and automatically controls the duration of the flash to produce the correct exposure. You determine the aperture by using a calculator dial on the flash unit. Within a given distance range, the flash unit will provide accurate exposure even if you change your flash-to-subject distance.

Dedicated flash units, the most complex technologically, are the easiest to use. They also offer the most flexibility. Dedicated units automatically set your camera to the correct sync shutter speed and lens aperture, and then control exposure by regulating the amount of light the flash emits. These flash units measure the light with sensor on the unit or through the lens (TTL) by using the camera metering system. Many TTL units read the amount of light reflected off the film plane (called OTF flash) and automatically control the flash duration.

Although built-in flash units are now common on SLR cameras, the extra power of an accessory flash gives you more options in setting f/stops and using different flash techniques.

Electronic flash troubleshooting:

The most frequent causes of flash failure are weak batteries and battery or equipment contacts that need cleaning. With electronic flash units, when the time required for the ready light to come on becomes excessive-about 30 seconds or longer-or it doesn't come on at all, it usually means the batteries are weak and need to be replaced or recharged, depending on the kind of batteries. See your flash equipment manual.

If there are deposits on the equipment or battery contacts, even brand-new batteries won't fire the flash. To prevent this type of flash failure, clean the battery ends and equipment contacts with a rough cloth. If the battery compartment in the flash unit is small, wrap the cloth over the end of a pencil eraser to clean the contacts. Clean the contacts even if they look clean, because some deposits are invisible.

Be sure to use the type and size of battery recommended for your flash equipment. Alkaline batteries have a long life and a short recuperation time. They are generally recommended for electronic flash units. Nickel-cadmium batteries are rechargeable and are recommended for use in many electronic flash units. See your flash instruction manual for the kind of battery recommended for your flash unit.

When you're not going to use your flash unit for a period of time, remove the batteries to prevent possible corrosion of the contacts in the unit.

Check the fittings between the flash and the camera to see that they remain tight. If your flash connects to your camera with a flash cord, make sure any press-on adapters are tight. Also, a break in the cord will prevent the flash from firing. You can often detect an internal break in the cord by wiggling the cord. When momentary contact is made, the flash will fire. When you detect such a break, replace the cord.

Check your flash equipment in advance to see if the batteries need to be replaced or recharged so that you're not disappointed when you're ready to take flash pictures. To prevent flash failure, keep all electrical contacts clean. Take a rough cloth and rub the ends of your batteries and the contacts within the flash unit battery compartment.