35mm Photography

The most popular film format is still a viable option

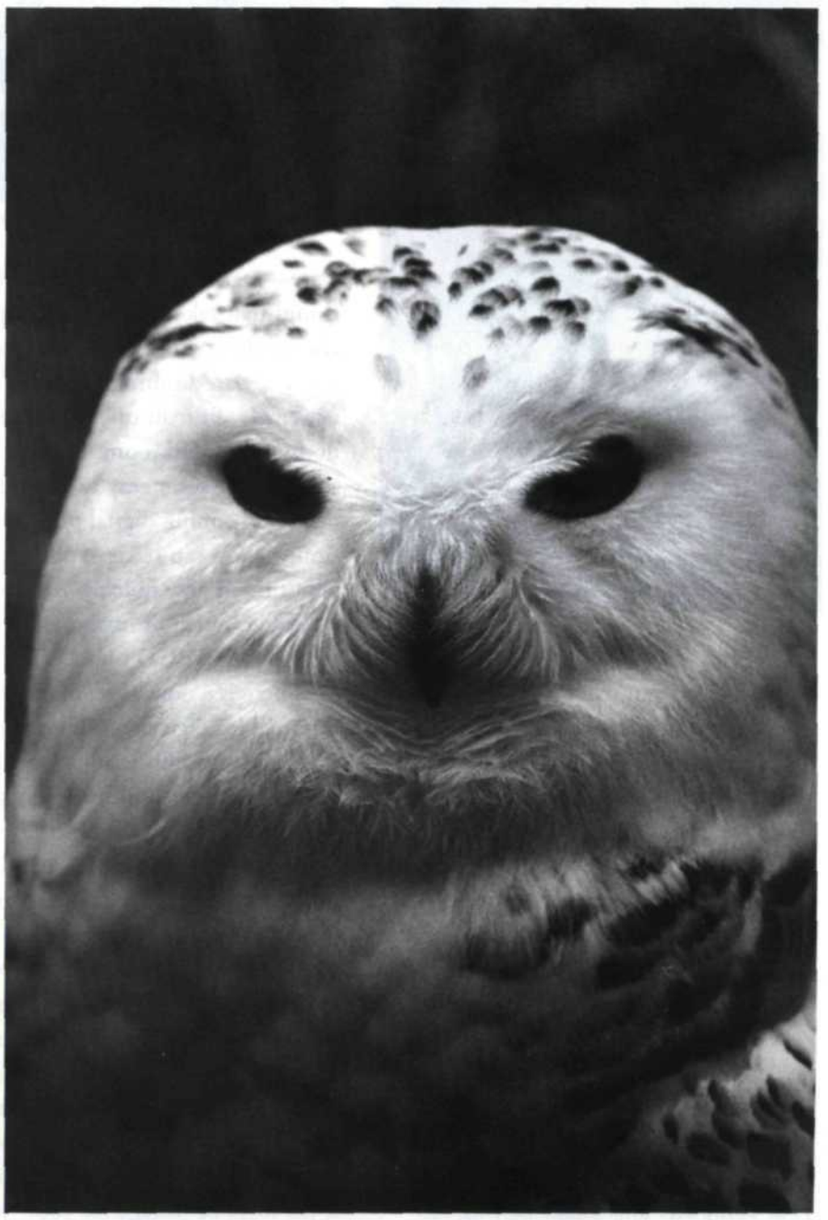
Text and Photos by Jack & Sue Drafahl

With the introduction of the digital camera, photographers have branched out into three distinct categories. The first group is the digital-camera photographers who want nothing to do with film. The second comprises those who shoot only film, and want *nothing* to do with digital. The third is a hybrid group that shoots both film and digital and brings their film images into the computer via the scanner.

Over the past couple of years, the percentage of photographers in each group has changed, and will continue to fluctuate for quite some time. So, how does 35mm film photography fit into this new equation? The 35mm photography technology has had decades to refine its cameras, lenses and film emulsions, so that photographers can take the best photos possible.

So, why use 35mm film cameras when digital is emerging? The key word with 35mm photography is flexibility. You can find everything from the one-time-use cameras that only cost a few bucks to high-end models designed for the working pros that sport a few more zeros in their price tag. It's this wide range of 35mm equipment choices that allows photographers to match skill level, pocketbook, and subject matter preference to a combination of the best equipment.

There are so many choices, how do you know which 35mm system is the right one for you? Your best bet is to educate yourself by reading the monthly articles in magazines like *PHOTOgraphic*. The Internet is also a great source of



Right: Wildlife photographers work primarily with 35mm SLR cameras and really long lenses—400mm and up—to get "up close and personal" shots.

Above: Many 35mm cameras offer complete macro photography systems, including close-up lenses, macro lenses, extension tubes, bellows units and special macro flash units.

information. You can log onto each of the 35mm camera manufacturers' Web pages to help with your buying decision. Keep in mind lenses, flashes and other accessories work on both digital and analog (film) systems, so you can look in both sections for those accessories.

Once you have made your investment in a 35mm camera system, how do you work towards becoming a better 35mm photographer? One of the best ways to learn new photo techniques is by reading the step-by-step articles and photographic tips found in each issue of *PHOTOgraphic* Magazine. You can also learn a lot from photography classes held at your local city college. Here the instructor evaluates and critiques the good and bad points of an image, which can be both an educational and a humbling experience. You will also find that there are dozens of photographic tours to remote locations offered by some of the world's leading professional photographers.

If you like the camaraderie of working with other photographers, one great place to hone your skills is with a local camera club. These clubs have contests, photo trips, and lecture nights. This all adds up to a great inexpensive package designed to help you improve your photographic skills. We also find that camera clubs are some of the strongest supporters of 35mm photography.

Most importantly, you need to get out and put your recently acquired skills to work. Practice and expand your skills in those photographic areas that you enjoy the most, and then develop into areas of new photographic interests.

When you look at images taken by well known photographers, you will find that they have developed their own unique photographic formula for producing dramatic images. They have discovered what equipment and shooting style works best for them and have expanded those skills to the limit. So, what about you? Have you found a niche that separates you from other photographers?

If not, then let's take a look at the following sections to see if we can answer some of your questions about 35mm photography and help you towards developing your own photo style.

35mm Camera Types

One-Time-Use Cameras: If you find yourself in a great photographic location caught without a camera (shame on you!), you should consider a One-Time-Use camera. These cameras have a single roll of 35mm film sealed in a small plastic case with a simple shutter, small internal flash, and a One-Time-Use battery. Built-in flash units can be turned on with a small button, and the film is advanced with a mechanical rotary dial. When you get to the end of the roll, return the camera to your local film processor where the camera is taken apart, and the film removed and processed. The negatives are then printed on either digital or photographic paper, and the camera plastic is recycled. Some of these cameras are in waterproof

Single-use cameras are very inexpensive, and handy when you forgot to bring a camera, or don't want to risk your "good" camera.

Above: Some 35mm cameras offer a "panoramic" mode. You can do the same thing by cropping the photo later, if yours doesn't.

housings so that you can take the camera snorkeling or use it in inclement weather.

The latest twist on this type of camera is Kodak's introduction of the One-Time-Use Digital camera. It's still the same camera, but the negatives are scanned to a CD, and digital prints are made from the digital files.

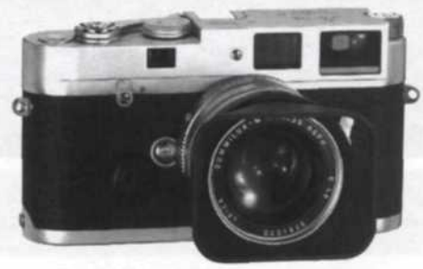
Point & Shoot 35mm Cameras: For years the most popular style of 35mm camera was the point & shoot camera. It was used for all types of photography from the very basic shooting to a backup camera for professional photographers. These are very compact cameras that generally use automatic for everything, but feature some manual control options. Most have a permanent zoom lens, built-in flash, automatic film advance, autofocus, autoexposure, and an auto ISO DX system.

Above: 35mm point-and-shoot cameras (also known as "compact" cameras) are small and easy to carry anywhere, very easy to use, and have everything you need built right in. For example, this Canon Sure Shot Z155 incorporates a 37–155mm zoom lens, autoflash unit, motorized film advance, and several shooting options, in a 4.4x2.3x1.9-inch, 7.9-ounce package.

The term point & shoot really describes how this camera works. In most cases all you have to do is turn the camera on, frame the subject, and press the shutter. The biggest down side is that you don't see exactly what you are shooting as the viewfinder doesn't "see" through the camera lens. With landscape shots this is usually not an issue, but it can be a problem when you move in closer. The viewfinder is offset from the lens, so when you get close to the subject, the image can be mis-framed. Most cameras feature a parallax correction in the eyepiece that allows you to re-position your subject so it is centered in the frame.

The 35mm point & shoot cameras have a minimum focus distance, so before you shoot too many images, check the instruction manual to see just how close your camera will focus. Try a few shots at this distance and if you find the focus is still slightly out, back off just a little more the next time. Remember that you can always enlarge the image later. If you know the limitations of your point & shoot camera, you can get some incredible images.

Rangefinder Cameras: One of the first true 35mm cameras on the market was the rangefinder camera. These cameras are a more professional version of the point & shoot cameras as they feature manual control over focus, exposure, and framing. Some of the more advanced models have the ability to change lenses and they all lack a moving mirror. This means there is less



Above: Leica's legendary M-system rangefinder cameras have been popular for more than 50 years for their quality and smooth, silent operation.

camera vibration and noise from mirror slap, so you will get sharper images and less obtrusive shooting. For many years Leica has been one of the forerunners in this type of professional 35mm camera.

35mm SLR Cameras: The 35mm SLR (single-lens reflex) camera has been the camera of choice for both advanced amateurs and professional photographers alike. The biggest advantage of the SLR camera is that you can see the exact framing and focus in the finder before you press the shutter button.

The first 35mm SLR cameras on the market featured only manual controls. These camera were a dominant part of photography training and there are still quite a few of the manual cameras around today.

The bulk of the 35mm SLR cameras today fit into the automatic category. This doesn't mean that they are auto-everything, but pretty close. These cameras provide maximum control as you can select the

Above: Today's AF 35mm SLRs have excellent multi-segment metering systems that canhandle a wide rangeof exposure situations very well. But sometimes you still have to step in.

automatic options you want, and use manual for the rest. Most of these cameras have exposure and focus modes that allow you to use full auto, partial auto, or full manual. So, you see you can have it any way you want!

The focus systems on today's SLR 35mm cameras are usually controlled with a small dial or switch on the side of the camera. Some will feature autofocus on/off, while others will have single, continuous, and off positions. If you use a macro lens, you may have to set a corresponding switch on the side of the lens so that it will focus properly. Single-shot autofocus works well if your subject is stationary, while continuous allows you to track moving objects. The manual position is great for situations when the camera can't achieve focus. Manual focus is particularly handy for macro photography as you can move the camera and lens back and forth to achieve proper focus.

The metering options on the SLR camera today are generally quite sophisticated. In most cases, you will have the option of choosing center-weighted, multi-segment, or spot metering. Center-weighted metering bases most of its exposure on the light striking the subject in the center of the image. Multi-segment metering divides the image frame into a number of segments, measures the light in each segment, and uses one of its hundreds of preset lighting conditions to match the one in the viewfinder and bases the final exposure on the preset. The spot metering system is generally used by professional photographers who can easily interpret exposure values derived from the light reflecting off small metered areas in the scene. If you are unsure which system to use, a good rule of thumb is to use the default setting on your camera, which usually is multi-segment.

The exposure modes are usually controlled with a rotating dial on the top of the camera and include PASM—Program AE, Aperture-priority AE, Shutter-priority AE, and Manual exposure control. The Program mode is the best place to start because in this mode, the camera decides the best combination of shutter speed and f-stop. You can usually bias the settings with a control knob that will adjust combinations of both the shutter speed and f-stop to maintain a good exposure (cameras offering this feature generally call it shiftable or flexible program).

If you need to control the depth of field, as with macro subjects or when you have subjects both near and far, you will probably want to use the Aperture-priority mode. With this mode, you select the aperture (f-stop) necessary to achieve the required depth

Above: You don't have to pay a huge size penalty to move up to a versatile AF 35mm SLR. The Pentax *ist measures 4.8x3.3x2.5 inches and weighs 11.8 ounces (body only).

Above: For under $400, you can get a very capable AF 35mm SLR, such as the Minolta Maxxum 7, Canon EOS Elan 7N, or Nikon N80.

Above: Nikon's F6 is a top-of-the-line pro AF 35mm SLR, a working photographer's dream.

One of the 35mm SLR's biggest benefits is its ability to accept a wide range of interchangeable lenses, providing the ability to handle just about any photo subject.

of field and the camera will automatically set the corresponding shutter speed necessary to provide a correct exposure. All bets are off if you use flash, as SLR cameras are usually restricted to a shutter speed less than ½50 for flash synchronization. That's not generally a problem with macro photography as most images are illuminated entirely by flash and the background exposure is not an issue.

When the action picks up and you need to freeze the motion, you might consider the Shutter-priority mode. In this mode, the photographer selects the desired shutter speed necessary to stop the action, and the camera will then automatically set the corresponding f-stop to ensure a good exposure.

If you require total control over depth of field and motion, then the trusty old Manual mode will be your best bet. Both f-stop and shutter speed work independently, so you must have a good working knowledge of exposure meters, and the exposure range of the film you have in your camera.

Another big advantage of SLRs over point & shoot cameras is the depth-of-field preview button. You can press this button to see the exact amount of focus that will be captured in the final image. The problem is that if the aperture setting is very small, it may be difficult to see the depth of field effect as the viewfinder image becomes very dark. (Some lower-end SLRs don't have a depth-of-field preview.)

One of the more advanced features of the upper-end cameras is high-speed motor drive. This is a great function for sports and action photographers who need to shoot a continuous series of images of a single event. When the drive is set to the highest speed, you may zip through a lot of film, but you will have several images that capture the peak of the action. Some of these cameras can shoot as many as 10 frames a second which means that your entire roll of film will be shot in about 3.6 seconds. That's why you see the pros carrying two and three cameras when the action is hot. When there is a break in the action, then they reload and go again.

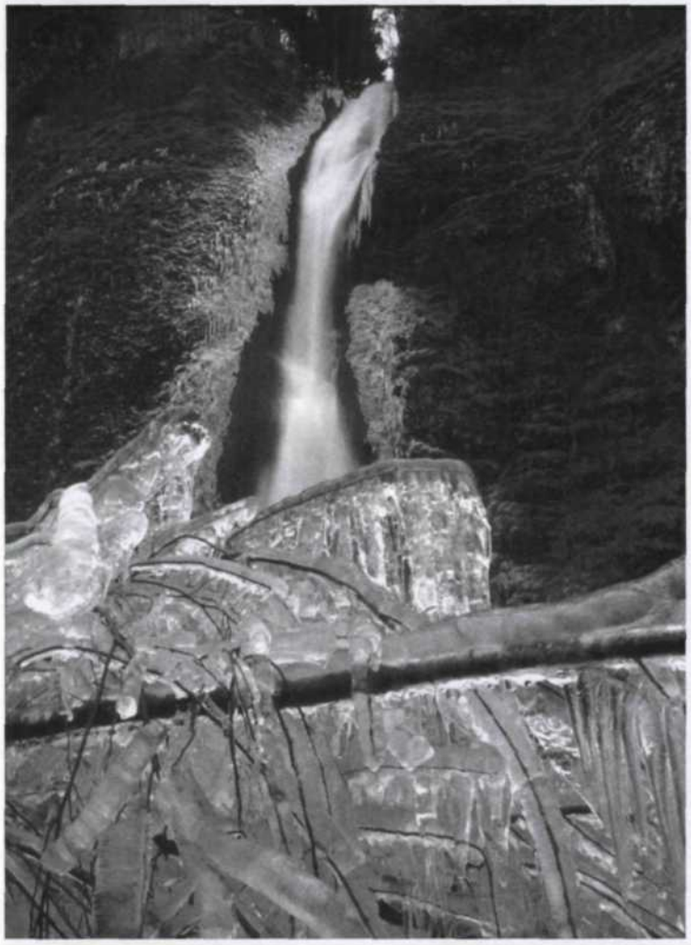
35mm Camera Lenses

One of the best reasons for selecting a 35mm SLR camera is that you can change lenses to match any photo situation. There are literally hundreds of different types of lenses that are manufactured both by camera manufacturers, and independent lens manufacturers.

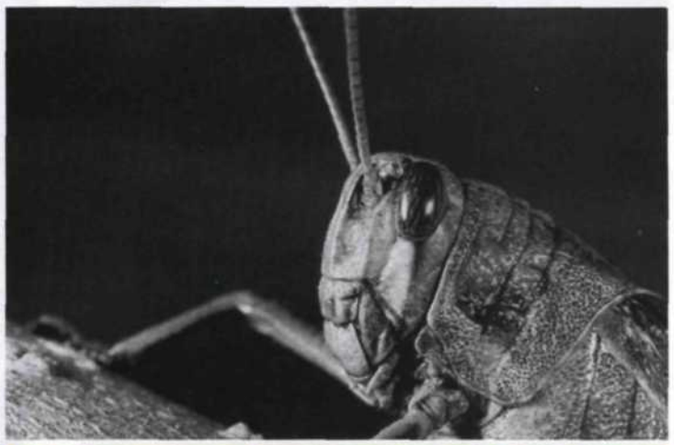
This huge arsenal of lens possibilities boils down to focal length, lens quality and depth of your pockets. Let's tackle each choice one at a time.

The focal length of lenses is easy to understand as the different groups include fisheye, superwide-angle, wide-angle, normal, telephoto, supertelephoto, and zoom lenses. Then you have specialty lenses such as macro for close-up images, mirror lenses for nature and astronomy, and soft-focus for portrait photography. Landscape, fashion, and architectural photographers generally prefer wider lenses, while wildlife and sports photographers need long and fast lenses in their camera bags.

Today the most popular of these lenses is the zoom lens. Thanks to new computer aided designs, we are now starting to see zoom lenses that can



Above: Wide-angle lenses offer great depth of field along with their wide angles of view, making them ideal for scenic photography.



Above: Serious macro photography is easy with a 35mm SLR and a bellows unit or extension tubes.

almost do it all. There are compact zooms that provide focal lengths from 28–300mm in a single convenient lens, and even include a "macro" function to provide the photographer even more flexibly.

When you are ready to purchase a new lens, a primary factor in lens selection is lens quality. The price and quality both go up as the manufacturer uses more internal parts, higher quality glass, and larger maximum apertures. This increase in a lens aperture will make the lens considerably larger and heaver, but will allow the photographer to shoot with higher shutter speed settings in a given light level. You will find this larger maximum aperture a real plus when the light level gets low or the action high. This increase in shutter speed might make the difference between a blurred image and a sharp one. The problem is that it is not unheard of for a lens price to double when the lens speed increases one f-stop.

35mm Film

We cannot tell a lie…film has taken a hit from the digital revolution. Almost all research and development of new emulsions has stopped. Some film manufacturers have even dropped out of the race, and those remaining have drastically reduced their offerings. The good news is that now your film decision is easier and the remaining films are the best of the best.

Your film decision will depend on your intended usage of your images. If you like to dabble in black-and-white photography, you have the choice of working in the darkroom with silver-based film or chromogenic films you can have processed at a one-hour lab. We are seeing fewer silver-based black-and-white films and more chromgenic films because C-41 processing is easy to find.

If you still like presenting your images to camera clubs or friends via the slide projectors, then slide film will be your choice. Some of the most recent film introductions have been transparency emulsions.

You can make color prints from slides, but if your goal is making color prints, then you should use color negative film. Ninety-seven percent of all the film images are taken with color negative film. With exposure latitudes of more than 6–7 stops, you might think of color negative film as autoexposure film.

Image Characteristics with Film: The characteristics and quality of film play a key part in your emulsion selection. Grain, contrast, color saturation, and resolution are the features used to evaluate how well a film performs. The grain structure is rated with a system called RMS; the smaller the number, the tighter the grain. It used to be that the fast film meant large grain, but that has changed with the introduction of some impressive fine-grain high-speed films. You will also find that slide films will have finer grain than color negative or black-and-white films at the same ISO. One of the best ways to evaluate grain is to look at the blue sky or out-of-focus areas in macro images. The grain is most apparent in these areas, which makes it an easy way to compare films. If you want to find the RMS value for a particular film, you can log onto the manufacturer's Web page and find information regarding the film's characteristics and practical applications.

When you look at the contrast curves associated with a specific film, it will be displayed as a curve that ranges from black to white. A high-contrast film will have very black blacks and very white whites. Low contrast will have gray blacks and off whites. With black-and-white films, contrast can be increased or decreased during processing or during the printing process using contrast filters.

As you might have guessed by now, we enjoy macro photography—and the tremendous macro capabilities of our 35mm camera systems. But 35mm can handle a great range of photo subjects and situations.

high. The first flash units on the market attached directly to the hot-shoe atop the camera, and correct exposure was usually a hit-or-miss proposition. There were exposure guides on the backs of the flash units designed to help with calculation of flash distance, f-stop, and ISO speed. Even so, extensive testing was necessary to find the best settings for the flash and a specific film speed.

Flash technologies advanced and the dedicated TTL flash system became an integral part of most advanced SLR camera systems. Dedicated flash units are designed to communicate directly with the camera on ISO speed, focus distance, and aperture setting. Once this lightning-fast calculation is made, the correct amount of light is sent to the subject as the picture is taken, by varying the flash duration.

The down side to the dedicated flash system is that each is unique to a specific 35mm camera manufacturer. The language for each flash is different and must only be used on the camera system for which it was designed—Nikon flash with Nikon cameras and Canon flash with Canon cameras, etc.

Over the years, third-party manufacturers have created module systems and flash variations to be used on an assortment of film camera systems. This allows you to mix brand A flash with brand B camera, when you set the flash to Manual and use the flash's exposure calculation chart.

Through the use of cords extending from the hot-shoe or special sync ports, you can remotely trigger a TTL flash with today's SLR cameras. Most recently, some SLR camera models have the ability to transmit cordless sync signals to the flash when the picture is taken. With this type of system, you can set up several slave flashes that can be operated off one SLR camera body.

Accessories

There are lots of accessories you can purchase for your 35mm camera system. The best rule of thumb is to buy accessories as you need them. It is all too easy to think you need

Above: Long lenses let you get close-ups of subject you can't—or don't want to—approach closely.
Left: Nikon's 35mm underwater cameras revolutionized underwater photography.

everything including the kitchen sink in your camera bag. The result will be that you will carry the bulk of these items around for years without ever using them.

We don't suggest that you wait until you are on a shooting expedition and then wish you had a specific accessory, but rather that you plan ahead. For example, let's say that you want to try your hand at photographing waterfalls in the shade using a long exposure. You read in one of the *PHOTOgraphic* articles that you need to use warming filters to compensate for the color shift due to the shade. Go ahead and purchase the recommended filter, and see how it works. If you find the images are still too warm or cold, you can then add more filters as you need them. Over time, you will find that the accessories in your camera bag are the ones you use for most of your shots.

The one filter that you should consider purchasing immediately is a polarizer filter. You should also consider step-up or step-down rings so you can use the filter on different-diameter lenses. You may need two different sized polarizers if your lens thread sizes are too extreme.

We don't consider the lens cap an accessory as it normally comes with the lens, but be sure to keep it handy to avoid scratching the lens element as you store the lens. A lens hood may seem like an unnecessary item, but the first time you start taking pictures in the direction of the sun with your wide-angle lens, you will see the need.

It would be nice if you only needed one camera bag, but that rarely is the case. As your shooting expeditions diversify, so will the varying amounts of 35mm equipment that you carry. You will probably need 2–3 different-sized camera bags to match the needs of the trips. Make sure they are padded enough to protect your investment.

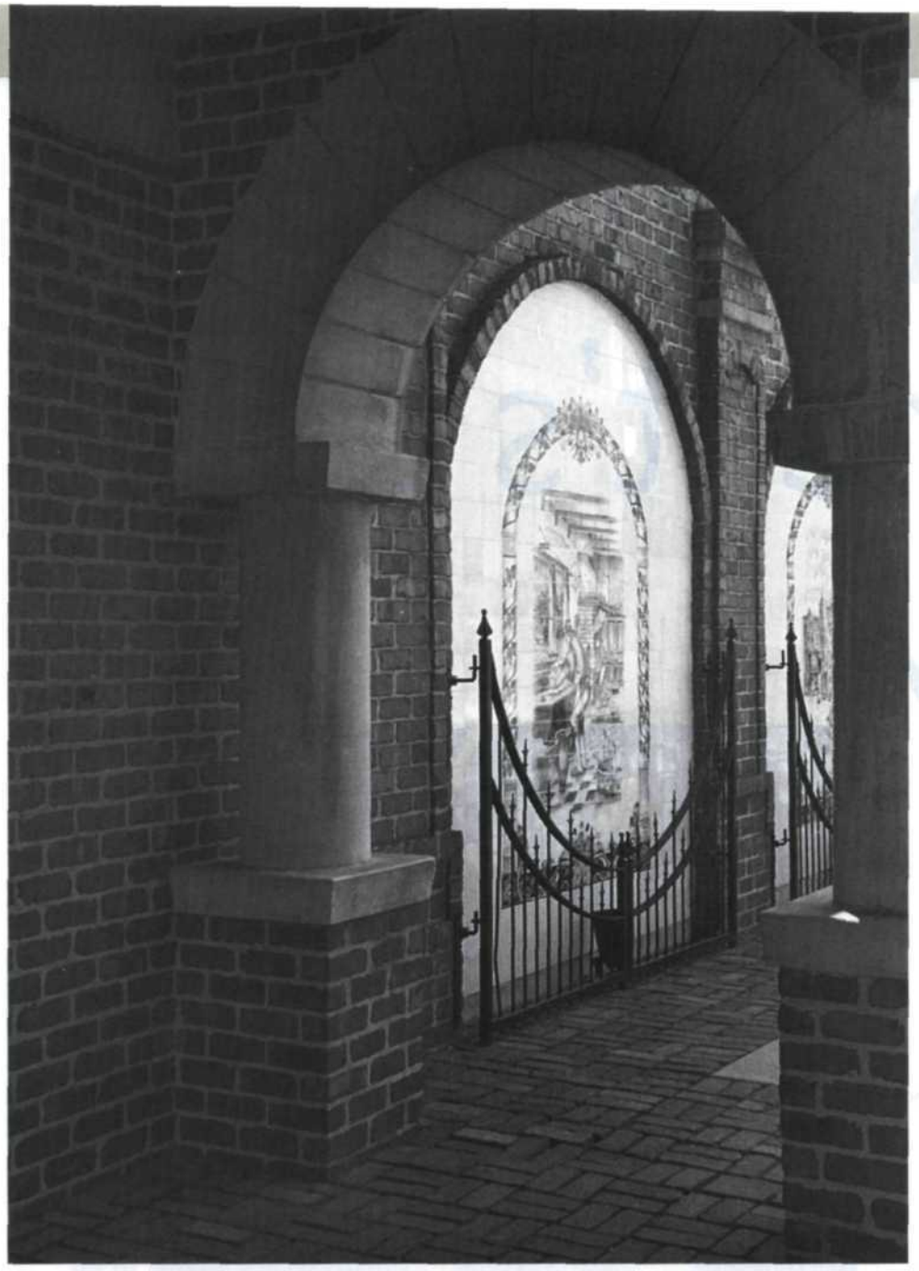
There is some confusion as to the difference between extension tubes and tele-extenders. The extension tube is used to make a macro lens or close-focusing lens focus even closer. Lens extenders look like extension tubes, but incorporate glass elements to magnify and increase focal lengths. For example, a 1.4X extender would change a 100mm lens to a 140mm lens. The advantage is that the lens extender doubles your lens capability without filling up your camera bag. If you are shooting macro and want to go beyond the 1:1 range found on most macro lenses, both the extension tube and tele-extender will increase the magnification. The difference is that the extension tube will force you to move closer to the subject, while the tele-extender allows you to maintain the same distance as without it.

Data backs for 35mm SLR camera systems accomplish several different functions. They can imprint data on your image, produce multiple exposures over a preset time sequence, enable exposure bracketing, and even set up a focus trap to capture images of skittish animals. These data backs are usually found on the more professional camera models, and are designed to expand the limits of your SLR camera to its maximum.

Cable releases come in a variety of shapes and offer several modes of operation. The oldest type is a mechanical cable release that screws directly into the shutter release and trips the shutter when you depress the plunger. Electronic cable releases attach to a special terminal on the front or side of the camera, so that when you press the button, the camera fires electronically. An even more advanced cordless release uses either infrared or radio controlled signals to fire the shutter. This remote release is great for nature photographers to use so they don't scare off their subject by being too close.

35mm vs. Digital

As we conclude our discussion on the different directions you can go in



While part of the attraction of 35mm cameras is the freedom of hand-held shooting, you can get sharper results at slow shutter speeds by mounting the camera on a steady tripod.

35mm photography, you may ask why someone would want to stay in 35mm photography with all the digital systems today. The truth is that digital cameras just can't do it all as well as film cameras. We hear arguments from both sides, and as far as we are concerned, both are right as analog and digital both have a place in photography. If you need reasons for entering the world of 35mm photography consider the following points in favor of film photography.

1. The exposure range of color negative and black-and-white films still far exceeds digital. They can have as much as 6–7 stops of exposure latitude. Digital cameras today are lucky to reach 3 stops of latitude.

2. The 35mm film camera uses considerably less battery power. One set of batteries can last days or weeks, while digital cameras zip through batteries daily which can cause them to overheat.

3. Film cameras can shoot at a much higher sustained frame rate than most digital SLR cameras, often 7–8 fps for 36 images. When you need to shoot fast action, the film camera will run circles around the digital SLR.

4. There are certain areas of photography where digital just does not work. For example, the 35mm film camera is necessary to shoot star trails as the digital camera is too fragile to leave out in the weather. In addition, the shutter will not stay open that long, and even if it could, the batteries would be dead. When you take a digital image of a sunburst, a blooming effect occurs causing the highlight areas to posterize.

5. Digital cameras are very fragile and can be damaged easily due to mishandling. You rarely hear of a digital camera that is dropped and survives. Film cameras, like the high-end Nikon and Canon cameras, are extremely durable and are made to take a lot of abuse. Film cameras can last decades with little or no repair. Many of the older 35mm camera models still work fine, while digital cameras are constantly being replaced by newer models.

6. One of the biggest problems with digital SLR cameras is that dust collects on the CCD or CMOS sensor when you change lenses. Film cameras rarely have dust particles on the film plane.

We could go on and on debating this issue, but it would never end and there are no clear cut answers. It's real easy to get wrapped up in all the new photographic technologies, but in doing so, we fail to remember that the reason we got into photography was to capture a special moment in time. Does it really matter how we do it? Why not grab your roll of film and buy a scanner and have the best of both worlds? Let's go take pictures and have some fun! ■