

OPENING THE SHUTTERS

Some time back I wrote an article on the mysterious f stop. It was called *The F Stops Here*. More recently a shop has appeared in the United States with exactly the same name. No sign of any royalties, sadly. So having covered the subject of aperture and elsewhere the topic of exposure I have either ignored shutter speed or covered it by implication depending on one's point of view.

Let us take the view that it needs a mention and have a closer look at it. Firstly, as I have previously stated, shutter speed is a poor term to use; the speed of the shutter is unchanging. Remember the analogy of a pair of curtains to represent the shutter unit? The basis of a simple shutter is that a curtain (fabric on some early Nikons) would open to expose the film. After a certain time had elapsed a second curtain would close off the opening to hide the film from the incoming light. The 'curtains' always travel at the same speed, only the interval changes.

More modern designs saw the use of a titanium foil (still in the rangefinder era), followed by the multi-bladed designs of the



Nikkormats in the sixties. These kinds of shutters that live close to the film are known as focal plane shutters. Focal plane refers to where the light from the lens focuses to produce an image. Some lenses have a shutter built in. The shutter looks quite like a set of aperture blades and is called a leaf shutter. Nikon use these in their large format lenses.

So we have a device that can open to admit light and then close to block it out. As the time it is open affects the quantity of light, we need a means of expressing this duration. Modern film is quickly

affected by light and the exposure time is necessarily quite brief. Under most circumstances a second is far too large a unit. So we use fractions of a second. A shutter speed marked as 30 is 1/30th of a second. In the same way a change of one f stop on the lens halves or doubles the amount of light, so shutter speeds halve or double as you move through the range.

An important thing to stress is that shutter speed cannot affect flash. Provided one does not exceed the maximum allowable

Continued on page 2...

Featured in this edition of the Grays of Westminster Gazette...

- Tony Munday - Opening The Shutters
- Nick Wynne - All Roads Lead To Grays of Westminster
- Andrew Skirrow - In A League Of Her Own
- Adrian Bailey - Okavango
- Geoff Trinder ARPS - Wide-angle Wildlife
- Gray Levett - Nikon Legend - Part LIII

speed (the sync speed) the shutter speed will have no bearing on flash exposure. Forget any ideas that suggest that a TTL (Through The Lens) flash exposure will be ended by a sudden closure of the shutter. It is the camera switching off the flash that does this job.

Shutter speeds, or exposure duration, range from 30 seconds to 1/8000th on many of the current Nikon AF SLR (Single Lens Reflex) models. The absence of an electronic timing mechanism does not stop the mechanical FM2n coming close to this top speed, it has 1/4000th, but does affect the accuracy of the longer exposures and thus the maximum is a whole second.

Given the direct relationship between shutter speed and aperture, for any given light level, it makes sense to have shutter priority auto. This is for when the shutter speed has to be just so and the aperture is of no interest. Nikon started using shutter priority with the Nikon F2 (using the aperture control unit) but are better known for introducing it on the Nikon FA.

Shutter priority has gone backwards since the version used on the FA. I have no idea why, but guess Nikon forgot how just good their first system was. Imagine you have set a shutter speed of 1/500th. Given decent light you would see an aperture of about f/5.6-f/8. Then the light starts to fail as it clouds over and gets a bit stormy looking. Your zoom lens has a maximum aperture of f/5.6 so you quickly see an error signal, as the camera cannot maintain a speed of 1/500th without a larger aperture. Not on the FA, as it would drop the speed by just enough to get the exposure right. In other words it uses the

highest speed possible if it cannot use the one you have selected, and tells you it has done it. Now that is a clever machine.

What about that great shutter speed myth, the safe speed for handholding? How much camera shake do you like to see in your shots? It is unlikely that one can produce the highest possible quality without a tripod. It is equally unlikely that all of us will have a tripod with us all of the time. So what we have is a compromise. The 'rule' that we can safely use a shutter speed that about matches the focal length, i.e. 1/60th for a 50mm lens, is just a bit of well-meant advice. It is a quick way to teach a new photographer the limits of what one can achieve without a tripod; it explains those duff shots taken with half-second exposures.

If we accept the minimum handholding speed is whatever it is, and that it varies from photographer to photographer and lens to lens, day to day etc...that would be a great start. If you really want to use a wide range of shutter speeds, or apertures, you must have, and use (!), a tripod. High quality but slow films, like Fuji Velvia (ISO 50), add to the need. Sermon over.

If there is no movement in a shot, changing the shutter speed will make no difference. But if we do have a moving subject, or background, then a longer shutter speed will allow this time to show on the photo. An extreme example of this is night-time photography. I like to shoot buildings at night and use exposure times of 30 seconds to a minute or two, to do this. These long exposures will ensure that pedestrians disappear and that motor vehicles record trails with their lights. During the day

one can fit a dense filter (like the Nikon ND400) and get similar results; some photographers do this to remove the public from day-time shots.

I know that I spent too much of my photographic life checking which aperture 1/125th would allow and then deciding whether to use that or open up a bit. What a waste that was. This followed a phase of invariably using my tripod and trying to maximise depth of field in each shot, so I guess it was some kind of improvement.

The difference between shutter speed and aperture is that we can quickly press the depth of field preview button and assess the effect of the aperture, but we cannot readily see the effect of shutter speed. So we have to experiment with various speeds to see what happens. The type of lens, speed of subject and the camera to subject distance will all have a bearing on the result. Something closer to the camera will always seem that much faster and will produce more blur.

Hopefully this will inspire you to take a look at shutter speed. It is a useful creative tool and a barrier at the same time. If you do not take notice of the shutter speed perhaps you could note the speeds you are using. If you always pick the speed but use a limited range perhaps you could experiment. Whatever you do, have fun.

By Tony Munday

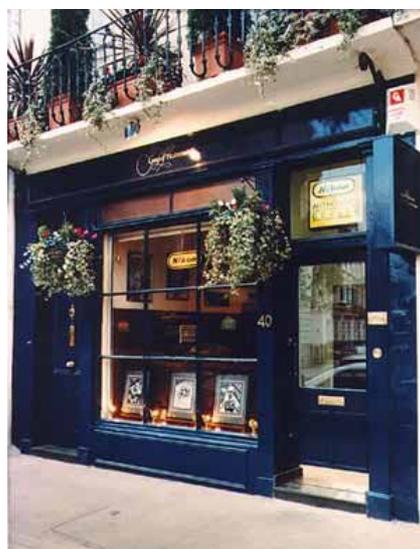
ALL ROADS LEAD TO GRAYS OF WESTMINSTER

Francis Thompson wrote a poem called "The Hound of Heaven" in which he describes the many routes he had explored in his life in a search for a feeling of having found what he was looking for, a feeling of having arrived in the right place. My personal experience is that it is a happy moment indeed when one recognises that there is something just so in life in some small compartment of it. One finds the ideal chair to doze in, that perfect marmalade, the screwdriver in the kit that is used ten times more often than all the others; or simply the *mot juste*.

Arriving at these milestones in the midst of the trial and error of life is part of the richness of it. Take the gentleman who visited the shop the other day. One got the impression of a man on a quest rather than a man having successfully completed it..... it turned out he'd been to one of the camera shows, travelled in hope and paid up his entrance fee secure in the assumption that a particular lens would be available to view and try. Battling with the crowds was worthwhile in his mind as the price to pay for hands on experience of the Zoom Micro Nikkor 70-180mm AF-D. Sadly nowhere in the hall was one to be found. Imagine his surprise when his attention was directed to the cabinet a few feet to his left in our shop! Moments later he was happily trying it out to his heart's content picking out the fine detail on the face of the antique barometer close by.

Whilst not every item in the Nikon range is on hand in the

shop, we constantly try to move in that direction undistracted by the need to provide demonstrations of other makers' offerings. Probably the partners won't be satisfied until their shop can give the exhibits in the photography section at the Kensington Science museum a run for their money!



Many customers contact us for the first time just after purchasing their first Nikon camera elsewhere. They are naturally full of hope for a happy lasting partnership with it. In that initial flush of enthusiasm they want the very best for it and bring it in to ask that it be cleaned and serviced and provided with one or two parts that would have come with the camera when new but "now seem to be missing". Often the list of missing parts turns out to be: proper body cap, pc socket and remote control socket covers, finder eyepiece, instruction book, strap, fresh batteries, a possible total of 7 or so items. When they add the cost of these items for say an FM2 body (about £120 including

service) or an F90 body (around £130) questions start to flow:- are Grays secondhand items painstakingly checked then given any needed service actions before being sold - yes, Sir! Are genuine Nikon body caps (or front or rear lens caps), finder eyepieces, strap attachments, straps, socket covers provided - yes, Sir! Are fresh high quality batteries supplied at no charge - yes, Sir! Is a full one year guarantee (parts and labour) included - yes, Sir!

I suppose the question of service has a few variations: for the shop it is, are they being served?; for the customer it is, well, am I being served? Customer satisfaction surveys gauge this and we are pleased to report recently gaining very nearly the same number of votes as the mighty Leicester based empire. They pipped us at the post. Their secret? Just a matter of 108 more branches and around a thousand more staff than us. Thanks for the game, chaps!

By Nick Wynne

IN A LEAGUE OF HER OWN

by Andrew Skirrow

To my mind, Heather Angel is in a league of her own when it comes to wildlife and natural history photography. Her photographs are simply more satisfying to look at than those of any other photographer I know. Those of you who were lucky enough to see her slide show *A Seeing Eye* at this year's Heather Angel Workshops will no doubt agree.

Each year we hold two day-long workshops with Heather. Suitable for the beginner and seasoned photographer alike, these hugely popular days leave one with the indelible stamp of Heather's enthusiasm and knowledge. Often learning as much about the subject of her pictures as the photographic technique itself, one is left in little doubt as to why Heather is held in such high regard in her field.

The correct venue is vital for these workshops and, if the response to this year's workshops is anything to go by, we have now found the perfect location and format for these events. This summer we were the guests of Saint Hill Manor, a magnificent Georgian mansion set in the Sussex countryside, former home of writer and humanitarian L. Ron Hubbard (himself an accomplished photographer) and now open to the public. The huge stone terrace in front of the house provided an ideal place for everyone to congregate and experiment with the vast range of equipment that Mark Fury from Nikon UK Ltd. had brought along. From this terrace, soaking up the sun

which shone almost continually for both days, one was able to try everything from the 16mm fisheye and 70-180mm Zoom-Micro to the latest 600mm AF-S lens to capture the terraced rose garden, the magnificent cedars, and across the lake to the rolling Sussex landscape. Sound idyllic? It was!

Each day started with coffee on the terrace followed by Heather presenting *A Seeing Eye*. This was a fascinating insight into the way that a true professional works in the field, the sort of impossible conditions that often have to be overcome or endured to get that perfect shot, and what we can do to improve our own work. This was followed by getting to grips with the Nikon equipment, a fine lunch, and then an afternoon of working in the field with individual coaching from Heather, again with the opportunity to try out the equipment in earnest.

We've had enthusiastic letters from this year's participants (many of whom have already reserved places for next year!) saying such things as:

"I learned more in one day than

I've learned in ten year's from the handbook."

"Heather was both inspirational and informative."

"A truly memorable occasion."

and:

"Saint Hill Manor proved an inspired choice of location."

"I should also like to thank you for the exceptional and generous hospitality provided throughout the day by our hosts at the Manor."

Certainly something worth flying all the way from New York for as one gentleman did this year!

We'd like to thank everyone who helped to make these two days such a success, especially Bob Keenan, Liz Nyegaard and their staff who provided such faultless service at the Manor.

If all this has whetted your appetite and you would like to experience it yourself, I'm pleased to announce that the 1999 Heather Angel Workshops at Saint Hill Manor will take place on 17th and 18th of July and we are now taking bookings. Don't wait too long before reserving a place since many of those who attended this year have already booked for 1999 and space is limited!

Free Calendars

Saint Hill Manor have very kindly donated 10 copies of the 1999 L. Ron Hubbard Calendar, featuring a collection of Mr Hubbard's photographs of Sussex landscapes taken in the 1960s. Please send in a postcard by 15th December to take part in the draw.

OKAVANGO

by Adrian Bailey

Mankind has long sought the location of the Garden of Eden. I think I finally stumbled on it, and if not quite the original location, it would probably have been a better choice – at least as far as wildlife photographers are concerned.

Imagine an oasis set in the middle of the Kalahari, the largest continuous stretch of sand in the world. A magical mix of forests, lagoons, islands, rivers and expansive floodplains - each nook and cranny occupied by an incredible array of all that African wildlife has to offer. This is Botswana's Okavango Delta. Its many habitat types enable it to support a remarkable diversity and number of life forms, among them 164 species of mammal, and more than 400 bird, 150 reptile, 80 fish and 5000 insect species. In 1996 I was commissioned to document this paradise for a new photographic book – *Okavango: Africa's Wetland Wilderness* (New Holland).

Over the course of 1996 and 1997, I spent about ten month's field time in the Okavango, together with my assistant and travel journalist, Robyn Keene-Young. We lived, mostly in a tent, in some immaculate wilderness areas, on private concessions and in Moremi Game Reserve – a 5000 square kilometre formally protected area that conserves fine examples of each the Delta's habitat types. We came to know individual lion prides and packs of wild dogs intimately and watched their cubs grow and lives unravel during our stay. We photographed the miracle of the

Delta, a delayed life-giving flood that moves through the region at the height of the dry season, bringing renewed hope to the parched land and animals. We experienced the relief of the first summer rains and shared the joy of new-born antelope, pronging through the fresh grasslands.

For a whole month at one stage, in treacherous wet-season conditions in Moremi Game Reserve, we encountered only one other vehicle. At times, herds of snorting buffalo interrupted our sleep as they settled in for the night under the same tree that we had pitched our tent. In one dry area elephant regularly visited to drink from a minute birdbath at the derelict camp where we lived, and lions often left their body prints on our doorstep before vanishing silently into the night. It was these intimate encounters with wildlife that came to distinguish our time in the Okavango from all our previous projects.

In photographic terms the project was a stern test of technique and equipment. Covering the entire

spectrum of the Okavango Delta's landscapes and inhabitants necessitated working on foot, and from a wide variety of vehicles including light aeroplanes, helicopters, motorboats, dugout canoes and four-wheel-drive cars. It's perhaps not surprising that few people can offer advice on how to wield a 500mm lens within the narrow, unstable confines of a dugout canoe.

The equipment, needless to say given the forum, was "Exclusively Nikon" from *Grays of Westminster*. A selection of Nikon F5 and F90X bodies, in combination with a wide range of Nikkor lenses from 24mm to 500mm, performed superbly under all conditions. A recent change to Nikon's new AF-S telephoto lenses has proven invaluable. The new lenses are virtually silent and, when combined with the F5, appear to intuitively keep fast-moving subjects in perfect focus with no effort at all – a great boon to wildlife photographers.

Conditions at times were extremely trying with dust and water almost constant companions and a hazard to photographic equipment and photographers! When necessary, and often at short notice, Grays organised in their inimitably efficient manner, for equipment to be cleaned and serviced.

The resulting book, *Okavango: Africa's Wetland Wilderness*, is published by New Holland Publishers, Tel: (0171) 724 7773.

WIDE-ANGLE WILDLIFE

by Geoff Trinder ARPS

I have been photographing wildlife for about twenty-three years and during that period have accumulated a lens range from 25mm to 600mm. The Nikon 600mm f/4 lens is a superb lens which enables photography of any subjects without having to approach too closely; add a 1.4 or even 2x teleconverter and it is still capable of producing excellent results.

For every plus there is usually a minus and in the case of the 600mm f/4 the considerable bulk and weight can be a real burden if it has to be carried far or for any length of time. To my mind there is one other drawback. To me photographing wildlife is my excuse for getting as close as possible without upsetting the species in question.

Where is this taking us you may ask. Well instead of using a big, heavy, long lens why not try using a wide angle for a change. A fraction of the weight and dare I say cost, and to get a useful image size a close approach is vital. It sounds great as an idea but the problems start once you try and get that close!

If you are lucky some species may allow a close approach, particularly if you are interested in insects. I personally like the results this gives when butterflies are the subject. It puts them in habitat and gives a refreshingly different result in a close up which could have been taken in a studio. I don't have anything against pictures like that however, as I have

often done it and the results can be stunning.

I took two pictures of this common blue butterfly. One taken with a 24mm lying down with the camera on the ground, the other with 125mm macro using a tripod and cable release. I wish all butterflies were as approachable as this particular one.

Let's move on from butterflies and contemplate photographing mammals using a 24mm lens. Having a badger set quite close to where I live I decided it would be worth trying to get some wide angle shots for a change from the usual medium or long telephoto pictures I had taken. As movement and noises caused by movement will easily spook badgers it is necessary to get the badgers to come to you rather than trying to sneak up on them. Everyone knows that blue-tits like peanuts, well, so do badgers and this is the way to succeed. A trail of peanuts leading to a depression in the ground also filled with peanuts (the depression so that the peanuts don't show) will, with luck, get the badgers where you want them. I have also hidden peanuts

behind a low ridge of soil and this means the badger hasn't got to lower his head so far.

At this point I ought to say that this stage is only reached after many visits, when the badgers have been accustomed to clicking cameras and sudden bursts of light from flashguns. Assuming this has been achieved we can return to using a wide-angle lens. I decided it would not be possible to actually hold the camera myself and would need some method of triggering it from, on this first attempt, about twelve feet away.

Give it some thought - ring Grays and the following morning an ML-3 arrives at my door. Two days later, armed with F90X 24mm lens, ML-3, various tripods, a music stand, an SB-24 Speedlight and of course a supply of peanuts. I depart for the badgers set. In the summer they are often above ground two or three hours before the sun goes down so it is necessary to get there early, 6-7pm in June, July and August is about right.

On arriving at the set the camera with 24mm lens is attached to a Benbo tripod and positioned low to the ground to get a badger's eye view. The ML-3 is attached to the camera and instead of using the hot shoe it is fixed to the tripod with masking tape. This leaves the hotshoe free to attach an SC-17 remote flash cord, enabling the SB-24 to be held above and slightly behind the camera. I use music stands to mount flashguns off-camera as they are light and take up less space than

a tripod. Peanuts are then placed behind a low ridge of soil with one or two leading from the set entrance about ten feet away. Switch everything on, check everything is working and retire, in this case, to about 10-12 feet behind the camera with a clear view of where you hope the badger will appear to eat the peanuts.

On this occasion I only had to wait ten minutes before I heard a snuffling sound of the badgers eating peanuts. Eventually it was in position in front of the camera, which I fired with the infrared remote ML-3. The badger didn't even raise its head and it wasn't until I had taken 3 more shots that it eventually decided to look up. In no time the nuts were eaten and the eight frames on the roll of film were used up. The badger slowly moved back to the area of the set. I had another camera body with me complete with film but no spare film (I should have known better). The other body couldn't be used with the ML-3 so I put down another supply of peanuts and lay on my stomach five feet away with a 35-70mm zoom and waited. Only minutes later the badger reappeared and I took several pictures with the zoom set at 70mm. The badger totally ignored me so very cautiously I edged forward using my elbows. As I got closer I continued to take pictures until I was only 1½ feet from the

badger, which continued eating peanuts with its head down. I eventually clicked my tongue, and the third time the badger raised its head and I got a couple of pictures with the lens now close to the 35mm setting.

Since that occasion I have photographed badgers many times and it is not unusual for them to approach within touching distance.

They often reach up and sniff the flashguns (I now usually use two) and on several occasions they have come up and sniffed the tripod bag within inches of my feet. I always think it is a privilege to take pictures of wild creatures but to have badgers so close can only be described as a magical experience. All you need is lots of patience and don't forget the peanuts!

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We are very pleased to announce that we now stock the superb Leatherman multi-tools.

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Both these Leatherman products will be featured in the next issue of the *Gazette*.



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The Nikon Legend - Part LIII

by Gray Levett

Continued from last issue...

Just as the Nikon S-36 Electric Motor Drive was the major accessory for the Nikon rangefinder, so too was the F-36 when it was premiered with the groundbreaking Nikon F single lens reflex camera in June 1959.

The standard back of the Nikon F is removed and is replaced by the F-36 drive unit. Just as the Nikon SP rangefinder camera and the models which followed required a minor service modification to use the S-36 motor drive, the Nikon F followed this practice in order to use the F-36.

The F-36 is almost identical

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both in design and concept to the S-36. It is a tad faster being powered by 12 volts. A firing-rate adjusting knob was added which allows single exposures, bursts of 2 or more, or fires continuously at a rate of up to 4 frames per second. Early F-36 motor drives were powered by a grey vinyl external battery pack connected by a one metre grey cord. The battery pack accepts 8 "C" type batteries. Again mirroring the S-36 a small Bakelite voltmeter was available reading up to 12 volts. Later versions of the battery pack were available in brown and finally a black finish.

The F-36 accepts standard 35mm film of 20 or 36 exposures. Nippon Kogaku recommended their re-loadable film cassette in place of commercial film, since the felt of the latter causes some friction as the film is drawn through it. It was also felt that this friction may reduce the driving speed and cause the batteries to run down more rapidly.

As these battery packs were not the most practical, Nippon

Kogaku overcame this by producing the Cordless Battery Pack. This attaches directly to the base of the F-36 to form a compact unit. A push-button release is located on the top of the pack's grip and works independently of the of the motor-drive release button.

Let us return to the early F-36. Due to the extensive research of Nikon historian and collector Calvin Ho we know that three versions of the F-36 were produced.

Version 1: The Nippon Kogaku triangle logo and serial number are engraved on the bottom plate. Calvin suggests that version 1 motors probably begin at serial number 97001, and go up to at least 97522.

Version 2: The triangle logo and serial number are on the front right hand side panel.

Version 3: The triangle logo has been removed, and the serial number is on the rear control panel.

To be continued...