

WILD LIFE FLASH PHOTOGRAPHY

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For some twenty odd years I have been a photographer of wild life in the Malayan jungle with some measure of success in the daylight field. But not until eighteen months ago did I turn my attention to night photography—after watching a large sambar stag, hind and fortnight-old fawn one moonlight night from a hide near a salt lick.

My cameras are an Agiflex III, $2\frac{1}{4} \times 2\frac{1}{4}$, with a 24 cm. tele lens and a Kine Exakta VX with a 13.5 cm. tele lens. These cameras are used side by side on a brass bar which is fitted on to a turn-tilt head on a very heavy solid tripod. The tripod is firmly established at one observation window of the hide. At the other window two flashguns are mounted either on tripods or posts driven into the ground. A third flashgun—an extension unit from one of the two main flashguns—is mounted on a post at the corner of the hide some 8 feet away from the cameras and 6 feet above them.

The equipment is assembled, all contacts checked and mounted at the hide during the day. The cameras are focused on a particular spot at the edge or centre of a salt lick or waterhole. The loading of the film into the cameras is done as late as possible during the day, for humidity is always high and the film can quickly become sticky and difficult to wind, due to absorption of moisture in the atmosphere.

The hide should be prepared with an eye to prevailing evening and night winds or breezes, which in Malaya are constant, for a gentle breeze carrying human scent across the lick or waterhole is sufficient to keep all animals away. As little clearing as possible should be done near the hide or the lick, except that any vegetation below the cameras or to the immediate right and left should be carefully removed, for when the flashbulb is fired such obstacles reflect light into the camera lens and can cause fogging.

The sequence of operation is very simple but should be practised until each movement becomes automatic, for everything is done in complete darkness. So soon as an animal appears at approximately the point of focus, the shutters of both cameras, which have been set at "Time", are opened. A quick, quiet move to a flashgun fires its bulb and the shutters are closed. The film is then wound on to the next exposure and the fired

flashbulb replaced with a fresh one. With care, it is possible to obtain several exposures in this way, the three flashguns making possible three exposures in a matter of some three or four minutes.

This method, known as "open flash", is most suitable for this type of work, because the full light output of the bulb is used to produce a negative of good density. I have obtained satisfactory results with a G.E. No. 50 flashbulb at a range of 100–120 feet, at $f5.5$, using Kodak Verichrome Panchromatic with the Agiflex III, or Kodak Plus-X with the Exakta VX. Kodak Tri-X with the Agiflex produces somewhat denser negatives. The use of Ilford HPS in either camera resulted in very over-exposed negatives at this range, particularly with the 13.5 cm. lens on the Exakta. The use of the G.E. No. 22 flashbulb, instead of the No. 50, helped to correct this.

On a cool night, slight mist rising from swampy ground may slightly fog the negative. Attempts to take photographs during rain were disastrous; each falling raindrop registers as a streak, widest near the lens and decreasing in width as the distance from the lens increases.

Sambar, seladang (*Bos gaurus*), tapir and wild pig react rather quickly to the flash during nights when there is the slightest trace of moonlight, leaving the scene after two or at the most three flashbulbs have been fired. On the other hand, during pitch black nights, as many as eight, twelve or fifteen exposures may be made with no reaction except the raising of a head for a few seconds. The younger animals seem to be the most suspicious of a flashbulb.

I do not think I am crediting these jungle animals with intelligence unjustifiably, when I say that their disregard for the firing of flashbulbs on moonless nights is due to their knowledge of natural phenomena. In Malaya at practically any time of night, flashes of lightning may be seen on the horizon or closer. During moonlight nights these flashes are distant flickerings invisible from the dense cover of the jungle, but during a storm they are almost blinding in intensity and usually accompanied by terrific claps and reverberating peals and rolls of thunder. On several occasions I have obtained quite reasonable negatives when a bright flash of lightning has beaten me to the flashgun after I have opened the camera shutters.

The animals take not the slightest notice of these storms but continue to graze and browse throughout them. They accept, as a matter of course, intense flashes in the inky blackness and, on a dark night, likewise accept the rather similar

flashes of flashbulbs. But they know enough to be extremely suspicious of an intensely bright flash when there are no clouds and when a moon is visible.

The operation of the cameras, changing of flashbulbs, loading cameras with fresh film and other necessary movements must be carried out with the absolute minimum of noise and movement. No sounds travel further on the still, soft silence of the jungle than the click of metal on metal and the tap of a flashbulb on the metal reflector or flashbulb socket in the gun.

The equipment described for these "open flash" photographs is only effective for the larger animals frequenting a fixed spot in fairly open ground and at a distance which permits the photographer to be present. The problem of the smaller creatures which do not visit salt licks or similar open spaces, and of carnivores, is different and after considerable experiment I found the best plan was to get the creatures to take their own photographs by using a trip thread or a bait.

The first difficulty was elephants. It would have been unwise to leave such expensive cameras as the Agiflex and Exakta with their flashguns in the jungle, for when an article belonging to a human being is discovered by an elephant, it is soon rendered useless.

After much searching and many trials I chose the Super Richoflex, a Japanese twin-lens reflex $2\frac{1}{4} \times 2\frac{1}{4}$ camera. It answered all the requirements of synchronized flash and would take a solenoid in the cable release socket comfortably. It was comparatively cheap—there would be no heart-burning should elephants pass that way. I bought four of these cameras. For the same reasons I chose and adapted four Japanese flashguns, Mimiyas.

The apparatus for this synchronized flash photography consists basically of a trip thread or bait thread which works at coarse or hair-trigger setting. It runs to a trigger box in which there is a spring contact. A lead connects this contact to a solenoid which is screwed into the cable release of the camera and operated by eight to ten U2 torch cells. The flashbulb is operated by two No. 412, $22\frac{1}{2}$ volt batteries.

Pressure on the trip thread releases the spring contact in the trigger box; closing the contact closes also the circuit of the solenoid and operates the camera shutter. The camera shutter operates the flashgun and flashbulb, thus making the exposure.

For the trip thread braided nylon fishing line of 16–30 lb. breaking strain is used in preference to wire, which may well

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injure an animal. This nylon line is odourless, undetectable even in daylight and stretches very little; neither sun, heat nor wet affect it. Ordinary sewing thread was originally used to connect the trip thread to the spring contact in the trigger box but termites showed a great liking for it and ate all they could find.

The key to success is knowledge of the habits of the animal. When these are known, a little thought and ingenuity will provide suitable adjustments to the equipment. For example, the only really effective bait for a prowling mouse deer is a hanging bunch of leaves of the mamaya or ludai, *Sapium baccatum*, in English the mouse deer's rubber tree. A tug by the deer on the lower leaves operates the spring contacts and the photograph is taken.

It is not often possible to get a longer range than 30 feet in the jungle without extensive cutting and clearing of undergrowth, which may well disturb the animals and perhaps add an artificial look to the resulting print. The largest elephant in the country will fit quite comfortably at a range of 30 feet on the $2\frac{1}{4} \times 2\frac{1}{4}$ format, while tapir, tiger, deer and seladang will be well covered without any bother.

For real close-up work on mouse deer, civets, wild dog and porcupine, ranges from $3\frac{1}{2}$ feet to 8 feet are suitable. The smaller flashbulbs SM Nos. 5 and 8 are ideal for these ranges although the aperture will have to be kept well closed down if the flash factors given on the flashbulb carton are used. In this close-up photography over-exposure seems more likely than under-exposure, probably because the subject is invariably in the "hot spot" of the flashgun reflector beam.

Many hazards and difficulties have to be surmounted in the humid rain forests of Malaya. Torrential rain and constant damp make it imperative that all cameras, flashguns, battery boxes and trigger boxes are housed as effectively as possible. These methods of animal self-portraiture would give good results in other countries, particularly for the smaller animals in timbered or scrub country, or where animals follow well-defined trails from rivers and swamps, to browse away from the water during the night. Ingenuity and a knowledge of the use of tools go a long way towards success.