34 EXPEDITION PHOTOGRAPHY

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Photography is an indispensable part of the modern expedition. It can be a major activity in its own right – great expedition photographs can express the spirit of the adventure, define the nature of the challenge. And it can support other activities – from documentation to publicity and fund-raising. Photography should therefore be integral to every expedition's planning and execution.

The expedition photographer has three main responsibilities:

1. To make a comprehensive visual record of the entire expedition from preparation through to its return home to meet the needs for documentation, communication and sponsorship.
2. To produce visually stunning images suitable for publication, exhibition, etc. that capture the identity of the expedition.
3. To work in a manner that responsibly respects the societies, peoples, cultures and environments that the expedition encounters, to ensure that other, succeeding, photographers will not be hindered.

It is important that all members of an expedition recognise that the photographer's work is a vital and valid part of the aim and objectives, and, indeed, that photography constitutes a major part of its achievements. To meet the high standards expected today, photography has to be a full-responsibility task, i.e. not the part-time interest of the medical officer.

FILM-BASED OR DIGITAL PHOTOGRAPHY

One of the first decisions the expedition photographer has to make is whether to use digital or conventional film cameras. Modern film and camera technology now provide very high-quality images at reasonable cost whereas digital cameras can offer considerable flexibility and savings in the long run.

Photography on 35mm format film is capable of producing image quality sufficient for all normal use at a reasonable cost; it is familiar to most expedition members and does not require new skills; conventional cameras can be relatively robust and independent of battery sources. However, pictures taken on film-based cameras cannot be reviewed until they are processed, images cannot be used directly for transmission, film is easily damaged in transit and running costs can be high, especially compared with the image quality actually required.

Digital photography can provide substantial cost savings for documentation because no film processing is required and images are easily reviewed in the field. Images are easily annotated immediately with accession code, description and location of a find; they are easy to transmit via satellite phone to a website; images of specimens, malady, accident, etc. can be emailed to home-base consultants for identification or advice.

However, the equipment is less durable and all are reliant on battery power; digital cameras are best exploited with a computer (although not a necessity); initial costs, including training, may be high; and image quality may be limited for publication use (see "Digital cameras" below).

In summary, where conditions are extremely arduous or images are needed for high-quality reproduction and where images are not needed for transmission, film-based photography is best. Where numerous images are needed for record-keeping, where conditions are not too challenging, e.g. static base camp, and there is a need to maintain websites, digital photography is most cost-effective, if not essential. Photographers on large-scale expeditions should consider using both film and digital photography.

PREPARATION

The main elements in preparation are: (1) to plan the photographic and documentary needs; (2) to plan for the post-expedition needs, e.g. publication, sponsorship; (3) to prepare and train on the equipment; and (4) to pack.

Photographic and documentary needs

The key task is to build the shot-list: a comprehensive listing with notes and priority gradings for all the pictures that will be needed. This requires discussions with the leader, the expedition specialists and scientific advisers, and publication editors as well as sponsors. For example, you need a picture of every person involved in the expedition; does this also mean sponsors and other backers, e.g. Mum and Dad? Will you need a photograph of every villager interviewed and, if so, will it be possible? You need pictures of the landscape: does this include geomorphological and exposed geological features as well? If so, is it necessary to include a scale, e.g. a metre rule? What kind of pictures will the sponsors need – and how many? If there is an accident, what needs to be documented?

This list should be circulated to all expedition members.

Post-expedition needs

This is the action list for the field that enables the shot-list requirements to be met, e.g. if a sponsor needs a picture of the team on the summit, you must ensure that a team photo – which clearly shows the sponsor's goods – is one of the mandatory activities in the push to the top. If you need a series of pictures showing base camp being established, the expedition leader should ensure that you are sent ahead of the main group and relieve you of other duties. Portraits of all interviewees needed? Who will take names and cross-check?

Planning for publication also means that you discuss picture needs with magazine features editors and picture editors. Ensure that you know their basic requirements, their likes and dislikes, e.g. some publications dislike ultra-wide-angle views, as well as pictures that attempt to be humorous; some dislike product placement – a trademark visible – even if it is unintended. Consider their schedules: when you return in the autumn, magazines are preparing winter issues – so will they want a summer travel feature?

Equipment

The best equipment to take on expedition is equipment that you trust and with which you are thoroughly familiar. If you are not an experienced photographer you will need to train and practise. This means learning to use the camera blindfold, so that you know which way to turn the dial for a shorter shutter-time with your eyes shut, where the button for holding auto-exposure is, which way to turn for longer focal lengths, and so on. Practise using the camera without film, taking vertical as well as horizontal format shots, so that you can operate it rapidly, without thinking and can release the shutter without shaking the camera.

Two months before departure, thoroughly test the equipment (simulating expedition conditions if possible particularly for polar work: test in a walk-in freezer) with film, and all the different combinations, for example of lens and camera, with and without flash, using different exposure modes and settings, etc., to ensure that it is all working fine. If you discover any problems, you have 6 weeks to repair and re-test the equipment.

Confirm that your equipment is covered by the expedition insurance or, if your own, inform your insurer of the expedition and the nature of the risks to obtain written assurance of continued cover.

Packing

Rehearse packing your gear, and then take it out for a trial run. It is so easy to forget the most obvious things, e.g. space for survival gear such as water, space-blanket, food. And will you be able to trek for 15 km at 3000 m with that load? What will you

take as cabin luggage and what will go in the hold? Will your carrier accept your big camera bag as carry-on? Can you persuade team members to take some gear or film?

OBTAINING SPONSORSHIP

Film distributors may offer special discounts for expeditions with scientific or humanitarian aims: enquire at their head office in the country where you are working. You may be able to obtain discounts on purchases of equipment and film processing, but forget about asking for the loan of cameras or lenses unless you have a solid or high-profile reputation. A website about the expedition – showing a portfolio of your pictures – can help to establish credibility.

SELECTING PHOTOGRAPHIC EQUIPMENT

Modern equipment can produce excellent results for all but the highest-quality half- to full-page magazine reproduction. Inexpensive modern cameras and lenses can produce image quality better than the best of older equipment. Therefore poor image quality usually results from poor technique. In general, the more you pay the better the quality, responsiveness, reliability and versatility that you obtain. The best-known makes, i.e. Canon, Nikon, Minolta, Pentax, Contax, Leica, all produce cameras that will meet the needs of most expeditions. It is not necessary to use mechanical cameras for extremely arduous conditions because modern auto-focus SLR cameras can be highly reliable.

The 35mm SLR camera

For highest image quality, precise and rapid operation, e.g. with exact exposure control and motor-drive plus auto-focusing, as well as versatility, i.e. its ability to cover every subject matter, the 35mm SLR is a beauty. But it is also heavy and bulky, and requires costly lenses to exploit its potential fully. If you do not fit more than one lens or do not need an SLR for specific uses, e.g. close-up or long-distance photography, a high-quality auto-focus compact camera is preferable.

Almost all modern SLR cameras are electro-mechanical, needing a battery to operate. This is not necessarily a problem for the modern expedition, which also runs radios, global positioning systems (GPS) and laptops. Wholly mechanical cameras, e.g. Nikon FM3, Olympus OM-4 and Leica R6, are high quality but costly and even second-hand examples of cameras such as Nikon FM2, Nikon F2, Canon F-1 (all of which are recommended) are not cheap; they offer good reliability, but they are slow to operate. On balance, the facilities given by modern auto-focus SLRs, e.g. rapid and precise focusing, motor-driven film-winding and excellent exposure control for available and flash light, far outweigh their battery dependence.

The 35mm range-finder cameras

These cameras offer convenience and compactness, but only the most costly, e.g. Leica, Contax, Nikon and Konica, can be relied on for publication-quality images. Auto-focus compact cameras are best when the expedition's photographic needs are modest, e.g. for pictures of people and general scenics intended only for reports or website.

APS compact cameras

Auto-focus compact cameras using APS format film are very compact and inexpensive. They are useful for informal shots, e.g. expedition parties, the grinning border-guard.

SELECTING FILM

Colour transparency (slide) film continues to be preferred for publication and is easily duplicated for slide presentations. However, it is also the hardest for the inexperienced to control and it is unreliable under expedition conditions (see "Precautions during the expedition"). All modern makes, such as Fuji, Kodak and Agfa, give excellent results: which you use is a matter of personal or a picture editor's taste. Films with high contrast and rich colour, e.g. Fujichrome Velvia, are more difficult to expose correctly than those lower in contrast, e.g. Kodak EliteChrome. Prefer "amateur" to "professional" film unless you have refrigeration or work in cold environments because amateur types have a longer shelf-life. For general use, choose ISO 100/21° speed film and for specific, low-light conditions use an ISO 400/27° speed film.

Black-and-white film is relatively robust under expedition conditions but requires more handling at the printing stage. Some publications, e.g. newspapers, will use black and white but many will much prefer colour transparencies.

Colour-negative film, i.e. for making colour prints, is disliked by publications. But it has advantages where publication is a low priority: it is relatively robust, is tolerant of inaccurate exposure control and high contrast, can be processed by street-corner laboratories throughout the world and is inexpensive. Colour-negative film is a good choice for informal shots and personal records of the expedition.

PACKING LIST

It is easy to pack too much and extremely difficult to pack too little. One approach is to select a camera bag that you can carry easily, and then see what you can get into it.

Camera bag or case

For base camp or porterage in arduous conditions use a water-/dust-proof case.

Choose plastics and resin cases, e.g. Pelican, which are almost indestructible (and available in orange), over aluminium cases. Use two or more smaller cases rather than one large one (to spread risk and load). When travelling on foot use a backpack-style camera bag, e.g. from Lowepro, Tamrac or Tenba. These distribute weight well, are comfortable to carry long distances but are not so convenient as shoulder bags for access to equipment. A sternum strap that stops the camera from swinging side to side is useful for trekking.

Camera outfit

Take two camera bodies to use in the field and, ideally, leave a third at base camp. The highest-power motor drives are seldom needed. Use at least two lenses: a wide-angle zoom, e.g. 28–70mm able to focus close-up, and a long zoom, e.g. 80–200mm. For a third lens, add a 50mm lens either relatively high speed, e.g. f/2, or a macro-lens. Avoid zoom lenses with very large range, e.g. 35–350mm unless they are top class. Avoid lenses shorter than 24 mm unless you know what you're doing.

If you take only one lens, use a high-quality wide-ranging zoom, e.g. Nikon 24–120mm, Canon 28–135mm (this has a image stabiliser to reduce camera shake). Picture quality depends on the lens that you use, so spend until it hurts. Supply all lenses with ultraviolet filters (minus ultraviolet, they look colourless), lens hoods and lens caps.

For close-up photography, the easiest option is a close-up lens that screws on to your main lens: it is cheap and improves image quality. The best but most costly option is a macro-lens with extension ring(s).

Flash is useful – not so much for dark conditions but for the very contrasty situations typical of many expedition environments. Take a flash unit that offers a tilting, rotating head with a fully automatic exposure system that is compatible with the camera.

Take NiMH (nickel metal hydride) rechargeable batteries for flash and camera motor drives. These are efficient and easily recharged. Take battery chargers appropriate to your expedition: from the mains, through vehicle lighter socket or solar power.

Take a tripod that can be set down low – camera about 15 cm from the ground – and up to at least 1.6 m. Carbon-fibre models are relatively lightweight but costly. A ball-and-socket head is lightweight and compact but less easy to set than a three-way pan-and-tilt head. Lightweight tripods can be made more rigid and steady by hanging a heavy weight, e.g. camera bag, from the centre-plate – where the legs meet – so that the bag just touches the ground.

Also take the following: a rubber puffer to blow dust away plus wet-wipe lens-cleaning tissues; jeweller's screwdrivers to fasten loose screws; permanent marker pens to label cassettes and CDs; film extractor to remove film tongues from the cassette; white 15cm rule as a scale; neutral grey sunglasses (to avoid distorting your colour vision); and spare lens caps.

Film

Budget on at least four rolls per day in the field where photography is a high priority and one roll per day otherwise. Alternatively, count up the shots in the shots-list and multiply by 10 to estimate the total number of shots that you can expect to shoot; divide the result by 35 for the number of rolls. Plan to return with some unused film – or you'll be in for some very nervous final days. A professional who manages to hit one top-class shot per roll is, well, on a roll – and is an extremely happy bunny. Therefore shoot far more than you think you'll need: it is better to regret "wasting" film than to regret not taking a shot. For longer expeditions with re-supply drops, bid for film to be included in the drops and, if possible, have exposed film taken to the home base for processing.

DIGITAL PHOTOGRAPHY

Digital cameras store images on small memory cards and provide instant review of pictures made. Those offering image resolutions of 1–2 megapixels provide image quality sufficient for websites and small-size reproductions, e.g. in reports. Sensor sizes of 4 megapixels or greater are sufficient for good quality reproduction, e.g. magazines to about A5 size. As with film-based cameras, quality follows price. Prefer cameras from well-known makes such as Canon, Nikon, Olympus, Sony, Kodak, Minolta, Fuji, Pentax, Casio or Epson. Prefer cameras using CompactFlash cards to others, i.e. not SmartMedia or MemoryStick. A computer is not necessary: special self-powered portable hard disks, e.g. NixVue or DigitalWallet, can download and store thousands of images off camera memory cards. Modern laptops, e.g. Macintosh iBook, offer convenient reviewing and cataloguing as well as a built-in CD burner, providing ideal back-ups for images.

Ensure that there are at least two ways to transfer images from camera to computer: a reader for the memory cards plus direct download from the camera. Take at least one spare cable of every type required as well as spare memory cards and batteries. Take a CD containing all software in case any need re-installation. Small, portable, battery-powered printers are available, which enable prints to be made in the field but running costs, e.g. consumables, can be high.

BASIC CAMERA TECHNIQUE

Exposure

With SLR cameras, use spot- or selective-area metering on auto-exposure to pick out the key tone, e.g. face, sky of a scene; then hold that exposure and re-compose the shot. Modern "intelligent" or evaluative exposure systems are effective and achieve better success rates than an inexperienced photographer. For key pictures, take several exposures and bracket them, i.e. make one shot that is deliberately

underexposed, one that is overexposed plus the camera's "correct" exposure. Expose carefully and bracket generously when shooting transparency film in tricky lighting conditions, e.g. high contrast, against the light or at night. You cannot get correct exposure without making some mistakes.

Focusing

Focus carefully and deliberately or allow the auto-focus time to do its work. Take special care when working close up, i.e. less than 0.5 m distant or with a long focal length lens. If using an SLR check the viewfinder image carefully. Squeeze the shutter button to avoid shaking the camera. At the telephoto end of a zoom, i.e. 200 mm and working close up, use a support whenever possible: best but most inconvenient is a tripod; a nearby tree or wall is convenient but seldom in the right place.

Portraiture

The best way to take a photograph is to give something of yourself. To take a portrait of "someone" is intrusive; to take a portrait of a friend is fun. Therefore, talk to people, spend time with them, respect them. Fifteen seconds of sign language and smiles can open an entire family to you, whereas one distant portrait snatched with a telephoto confirms you as a stranger at best and gets you pelted with rocks at worst. Portraits are most effective at a lens focal length of between 50 mm and 135 mm, with the face or part of the face filling the frame, i.e. from well within their personal space, and the focus on the nearest eye. Diffused lighting from one side, e.g. from an open door, with a plain dark background, e.g. plain walls, often gives effective portraits. Measure exposure from the lighter side of the face.

Landscape and topography

Every landscape has its most pleasing lighting – usually, but not always, with low, raking light soon after dawn or before sundown. But note that, in tropical latitudes, sunrise and sunset last only a few minutes. In mountainous regions, light can reach certain valleys only relatively late in the morning. Use interest in the foreground, e.g. flowers, shapely rock, to lead to the background. Take portrait (vertical) format pictures as well as landscape (horizontal) format. Don't be afraid of including the sun in the picture. Landscapes can be taken with telephoto lenses as well as wide-angle ones: a long view detailing a distant mountain village is more effective than a vista of the valley showing nothing in particular.

Use flash in bright light

Under the equatorial sun, shadows are very heavy and highlights burn out: modern flash units are effective at putting some light into shadows, greatly improving pictures. Don't be afraid to use flash in the midday sun: everyone will think you're mad, but you know better.

Basic composition

For non-documentary work, let the picture situation guide you; listen to the inner voice: go close, let it blur, hold the camera askew, shoot the unobvious – whatever. Do not follow any rules or you'll miss the spirit of the place. Get close or you'll miss the action – it is always better to be too close than too far. Above all, don't think: just be guided by what you can see in the viewfinder.

PRECAUTIONS DURING THE EXPEDITION

Keep all your equipment covered when not in use. Keep lenses covered front and rear when not in use. Keep an ultraviolet filter on all lenses at all times. Clean all your equipment regularly; especially blow dust off the front and rear of lenses and from the eyepiece of cameras. Above all, look after yourself: one sick camera is a nuisance but one sick photographer disables *all* the equipment. And avoid taking unnecessary risks, e.g. climbing a dodgy tree limb for a better view: it is not worth it.

In transit

Keep all film and digital cameras and key items in the hand baggage. Never leave unexposed or unprocessed film in hold luggage. Check formalities with the embassy's trade attaché if you plan to take in more equipment than a normal tourist would: obtain official letters of support. It may be necessary to prove, through carnet procedures, that the equipment is a "temporary import", i.e. you will take home everything you bring in. This can be costly and extremely troublesome if equipment is lost in the field.

Cold conditions

Keep camera and battery packs, e.g. for motor drive or flash, warm, i.e. close to your body, until you need to use the equipment. In extreme cold, take care not to place your face to the camera or touch metal parts, e.g. the tripod, with bare hands. Make those difficult-to-reach settings before going out. When returning from the cold into the shelter, enclose the equipment in a bag or case and allow to reach near room temperature before exposing to warm conditions; in the humid conditions of a hut, a difference of only a few degrees is sufficient to condense water on your camera.

Hot, dry, sandy conditions

Use ample supplies of plastic bags to isolate against sand and dust. Many kinds of zip- or pinch-fastened plastic bags of varying durability and cost are available. A bin-bag closed with rubber bands is cheap and effective; one inside another is even better. As a bag becomes dusty, do not hesitate to dispose of it (make someone in the team happy) to use a new one. Where extremely hot and in a static expedition, consider keeping film in a deep hole in the ground: temperature will be lower than above

ground. Keep film and equipment away from high temperatures such as inside cars or tents in full sun. Take particularly good care of transparency film. Be aware that a windowsill in the shade in the morning may receive full sun later in the day.

Hot, humid conditions

Store film and unused items in air-tight food containers with sachets of silica gel to absorb moisture and discourage moulds from partying on your film or equipment. Refrigerate film if possible, but remember to leave in containers to warm up before loading film to prevent condensation on the film. Process exposed film as soon as possible. Keep film and equipment away from high temperatures, e.g. inside unsheltered tents or from direct sun. Take particularly good care of transparency film. Remember that a car dashboard in the shade in the morning may receive full sun later in the day.

Wet conditions

For rafting, kayaking, monsoon rains as well as snorkel diving, cameras may be protected from water in specially designed Ziplok plastic cases. These provide protection, ranging from water splashes to scuba-diving depths, according to design and costs. Alternatively, use splash-proof or underwater cameras: the range runs from inexpensive point-and-shoot models to those suitable for scuba-diving depths.

LEGAL CONSIDERATIONS

Before the expedition

It should be explicitly agreed from the outset that the copyright in photographs should remain with the photographer. The role of the expedition in working with the photographer and making the venture possible is best recognised with a licensing agreement between photographer and expedition, whereby the expedition is entitled to use freely the photographs for reports and the website. In addition the photographer agrees to pay the expedition a royalty – usually 50 per cent – of net earnings (earnings less direct costs of sales) from the photography, e.g. publication fees from magazines, sales of prints. All expedition members should also sign a model release to the photographer allowing use of the pictures in which they feature.

During the expedition

Avoid photography close to military or government areas – anywhere a national flag is flying should be avoided. Do not photograph military convoys, naval ships or military aircraft. Stop immediately if ordered by any person in uniform: no picture is worth your life or detention. Stop immediately if your subject appears distressed or embarrassed. Approach photography of nudity and of minors in the nude with

caution; know the local laws. And ensure that, if you sustain stereotypes, e.g. "noble savage", "innocent native", you do so consciously. This is important when you publish expedition results in the host country and because websites are globally accessible.

ON YOUR RETURN

Process your film in relatively small batches to avoid disastrous loss and allow review of the results for adjustments to be made to the processing of the remaining rolls. Caption and mark up every roll immediately. Mount the best and keep them very, very safe: cool, dry, dark and secure. Make duplicates of your best shots; scan them if you can, but never, ever, project your best originals.

Publications

Immediately re-establish contact with publications that you contacted before departure: tell them you're back: "Great trip, great pictures – will show you some soon; is that OK?" Most publications will accept scanned images for review; some will insist on the originals for publication. Before you send irreplaceable material, obtain confirmation that the recipient will accept liability for loss or damage to originals. Then send a delivery note enclosed with the pictures which states clearly the fee for loss or damage and that the recipient accepts this liability on accepting the consignment. If you do not obtain that confirmation, you must weigh very carefully whether you will risk irreplaceable material to a stranger. In general, use your material with imagination and determination, and you can easily be published, earning useful money.

Caption everything clearly, present all work neatly and, whenever possible, support the pictures with a well-written article.

Picture libraries

The market for travel photography is saturated, over-supplied and highly competitive. All but the most skilled, well-equipped and utterly determined should look elsewhere. If there is a strong news or magazine feature angle, e.g. discovery of an unknown tribe, picture of a live Dodo – or that ilk – there may be syndication possibilities with news picture agencies.

FINAL WORDS OF ADVICE

Stay fit, healthy and awake: photography demands all your faculties working at top notch. Go the extra distance: all good vantage points are where the expedition group is not. If in doubt, press the button: you cannot go back. Always have your camera within reach: you will be given only one chance. Enjoy and accept what life offers your camera: life is what is worth sharing through your photography.