

# equipment for hill and mountain photography

**davebutcher**  
fine art black and white photography

## camera

Choose a camera that is light, robust, easy to use and has a built-in meter.

Decide what format you want to use, digital or 35 mm or medium format film.

For digital and 35mm you have the choice of compacts or SLRs. The latter have every feature you could wish for but are bulky and heavy.

Compacts are small and, if you choose one with a good lens and a few extra controls, can give excellent results, so don't write them off as only being suitable for taking holiday snaps.

Digital cameras are power hungry and need lots of batteries. Make sure you carry enough spares to get you through your trip, especially if you make heavy use of the built-in preview screen.

If you want the higher quality of medium format film photography the rangefinder designs, such as the Mamiya 7 that I use, are by far the easiest to handle and lightest. I used a Mamiya 645 Super in places like the Scottish Highlands and Alps for several years but supporting the camera to avoid camera shake was always a problem. This shape of camera is much harder to hand-hold and really needs to be used with a tripod. They are also much heavier because of the prism viewfinder; the alternative and lighter waist-level viewer for this type of camera is not practical in the hills; in winter it would quickly become impossible to frame any shots as the viewfinder fills up with snow!

## a comparison of medium format film to digital SLRs

If I scan my 7 x 6 cm negatives to obtain a digital file (200 Mb grey scale, 600 Mb RGB), in order to obtain a similar file size from a digital camera I would need a camera with a sensor of over 100 Mp. In addition, they do not cope well with large brightness ranges and need the use of special techniques to combine several exposures of the same image (not easy for ski shots) to compensate whereas film has all the detail on a single negative. I am also taking photographs at temperatures down to -35C and have never been let down because of battery failure. Consequently I will not be switching to digital cameras anytime soon!

## lens

My favourite lens is a 43 mm wide angle (equivalent to about 21 mm on a 35 mm camera). Before I was taking photographs for a living I often found myself just carrying one camera with the wide angle lens and a tripod. My motto

being 'Keep it simple, keep it light'!

Nowadays I need to be sure of getting the shot so I carry 1 camera and 43 mm, 65 mm and 150mm lenses. I will also have a spare body and 43 mm lens safely wrapped up in the bottom of my rucsac. A short telephoto allows part of a scene to be pulled into the image, away from other distractions. Something in the range 75 to 120 mm (on a 35 mm camera) is about right but mostly I use one of the two wide angled lenses.

Digital cameras often come as kits bundled with a single zoom lens. If you can find one with a range of 20 mm to 100 mm then for landscapes (and portraits) you will probably be able to take all of your shots without the need for any other lenses.

Longer lenses are bigger and bulkier so think carefully about what you will use such lenses for before buying them. I have seen lots of people on courses that carry big and heavy cases of camera gear around the hills but seldom use most of it. The lighter your camera pack, the more you will enjoy your photography in the hills.

For digital cameras one of biggest problems can be dust on the camera sensor. If you only have 1 lens and seldom (or never) remove it this problem is largely removed.

## tripod

Contrary to popular wisdom about tripods, my advice for hill and mountain photography is the lighter the better. A tripod that is so heavy that you are reluctant to carry it is useless. Buy one that you don't mind carrying and using. It should also have a quick-release head that holds the camera steady.

If going up mountains, the tripod needs to be short enough to fit inside the rucsac so that it can't catch on rocks and knock you off the path. If used in strong winds you can adapt by not extending the legs very much, if at all, and splaying the legs wider, if possible.

I use a Gitzo 4-section carbon fibre tripod which, with a Gitzo or Manfrotto lightweight quick release head, weighs just 1400 grams and can be raised to 2 metres. I also have a smaller lighter version weighing just 1100 grams that I use for skiing and more arduous trips into the mountains.

## carrying the camera

The number one criteria for a case is to buy one that does not deter you from taking pictures.

For me this means that I seldom use rucsac style camera cases. I want the camera to be immediately accessible no matter what predicament I find myself. Sometimes it may not be safe to take off a rucsac and open it carefully on the ground in which case I would not take any photos. This is clearly unacceptable!

Having tried lots of different methods for carrying my camera I always come back to the same basic set up which I use for walking (hiking), backpacking, mountaineering, skiing and snowshoeing. The camera should always be immediately to hand to allow for the rapid taking of photographs when the situation arises but it also needs to be protected from banging on rocks, etc.

I only carry the camera in a rucsac when the weather is so bad that there is no chance of any photography. The rest of the time, the camera is in a padded case on my front, just above waist level held using shoulder straps and a padded waist belt. The case I use is a LowePro Specialist, sadly no longer made, on a Toploader harness with a Deluxe Waistbelt.

I carry a normal mountain rucsac for the rest of my hill gear and it's large enough to take my camera gear, including the cases, when the weather closes in. The Lowepro Specialist camera case that I currently use has a cover for use in all but the worst that the weather can throw at me, so it has to be really bad before the camera is put away in the rucsac!

Sometimes I also use 1 or 2 small lens cases strapped to the side of the camera case, to keep it handy. Filters, film and batteries are in the camera case too.

Mountain weather is often wet and none of these cases are waterproof. In showery weather, wrapping the camera or spare lens in a lens wrap or plastic bag inside its case is often all that is needed to keep gear dry and ready for use as soon as it starts to brighten up.

### **carrying a tripod**

I always carry a tripod now that I have one that is light. Again I use the same logic that I used for the camera; the tripod must be immediately to hand.

After a bit of testing, I found the best system to be one using a karabiner (of the type used for climbing; not the so-called 'gear krabs' which are too small and fiddly to use in practice) passed through a loop of the rucsac shoulder strap with the widest part of the clip facing downwards. These clips have a spring-loaded

gate at the wide end that makes it very easy to take the tripod out and easier still to put it away just by banging the neck of the tripod head against the gate. The tripod can then be hung from this by the neck of the tripod head.

To pull it back out of the way, I strap one of the legs to the rucsac waist belt or to the rucsac pole loops, useful on steep terrain where the tripod legs would otherwise hit my thighs.

### **filters for B&W film users**

I try and keep filters to a minimum because it takes time to change them (I have to use screw-on ones since the slot-in type interfere with the Mamiya rangefinder focussing system) and a bunch of filters soon adds to the weight being carried.

My standard set would be Dark Yellow, Orange, Yellow and Skylight or UV. To this list I would add Green if I'm going somewhere with lots of trees. A dark yellow is a good compromise on bright days; it darkens skies quite a bit without reducing shadow detail to the extent that an orange filter would.

The only other filter I would use is an infra-red (IR) one if I'm using IR film. In fact this usually adds 2 filters since I would need the IR filter for taking the shot (a Heliopan 715, with maximum transmission at 715 nm, for Ilford SFX film) and usually also a far-red filter (such as a B+W 92, with maximum transmission at 692 nm) which you can just see through and also transmits a small amount of IR. This can be used as a viewing filter before loading SFX. When you have IR in a scene it glows red when viewed through such a filter. This lets you decide whether it is worth loading the film. N.B. A deep red 25A filter does not show this effect.

Finally, if you are using screw-on filters in cold weather it is worth investing in ones with a brass mount, such as Heliopan or B+W. Brass mounted filters are easier to screw on and off in cold conditions, unlike lightweight alloy mounts which can stick and become almost impossible to remove on the hill.

### **filters for digital users**

The coloured filters that are an essential part of a black and white film users' kit bag are completely unnecessary for digital photographers. In fact if you use them they will make your life much more difficult when you come to adjust your images on Adobe Photoshop or whatever other program you use.

A polarising filter is useful on sunny days. It can reduce the overall brightness range and let you

keep shadow detail while pulling in detail in the clouds.

A grey graduated filter will also darken bright skies and clouds and can similarly reduce the brightness range and avoid the need for combining several exposures of the same image together. Be careful of the overlap area; the graduated area has a straight line but mountain range landscapes are seldom flat or they wouldn't be mountains!

### **care of filters**

I clean my filters before a trip and always carry lens cleaning tissues in my camera case and a small blower brush. Dirt and finger marks on filters can reduce the sharpness and contrast of an image so it is worth paying some attention to keeping them clean.

### **batteries**

If you are using your camera in cold conditions then use lithium batteries; they perform much better than alkaline ones.

I always put in new batteries before a big trip and seldom have to replace them during the trip. Always carry at least a couple of spares. I once found myself changing a battery on a snowy day in the mountains above Glen Coe in Scotland only to discover that the brand new battery didn't work. This left me with one shutter speed on the camera (1/60 sec) that worked in the absence of batteries and no meter. However, without a tripod it was pretty much the end of the days shooting.

I try and learn from my experiences and this has never happened since and now I always carry more spares than I think I could possibly need.

### **film**

I have tried lots of different films over the years but have settled for just one now. All of my shots are taken on traditional medium speed (100 - 125 ISO) film. The film I use is Ilford FP4 Plus. This is a very tolerant film that can cope with difficult lighting (such as sunlit snow with deep shadows) better than more modern films. It provides a reasonable compromise between fine grain and speed.

The only other film that I use is Ilford SFX for infra-red shots.

### **clothing**

If your photography is combined with another mountain activity, such as hill walking or ski mountaineering, etc. then 4 basic layers for the upper body usually suffice, possibly with another one, such as a duvet jacket in seriously cold conditions, particularly if you intend to be standing around for any length of time waiting for shots.

Short or long-sleeved wicking T-shirt (e.g. those available from any of the reputable outdoor clothing manufacturers, definitely NOT cotton).

Fleece shirt, one with a zipped polo neck is even better.

Fleece jacket or duvet gilet, a snug fit will keep you warmer than a baggy one.

Waterproof jacket - avoid long ones as they can restrict leg movement on steeper slopes.

For legs, a combination of 3 layers is usually sufficient:

Windproof, quick-drying trousers with a few pockets are good (definitely not denim or similar - once they get wet you will chill off quickly and could have hypothermia before they dry!). Fleece trousers will keep you warmer in cold weather.

Long johns or warm tights can be used as your base layer in winter.

Waterproof trousers. Ones with full length leg zips are the easiest to put on but the zips can leak on some of the cheaper or more lightweight models.

### **head & eye protection**

A warm hat is a necessity in winter (and in summer in Scotland!). A sun hat that protects the face and neck from harmful UV rays is needed in good weather in the winter in high mountains just as much as in the summer.

Sun glasses are a necessity if you are going on to sunlit snow for any length of time. Make sure they are suitable and consider buying glacier glasses especially for your trip to avoid eye problems. Ski goggles with light coloured lenses (usually yellow, pink or orange) should also be taken if you think you could be caught in severe weather, such as snow or ice storms.

### **boots**

Make sure that your footwear is appropriate for the activity and they are comfortable before going on a trip.

## **gloves**

I use thin windproof fleece gloves for most occasions and warmer ones or ski gloves, for colder weather. Silk liner gloves are useful for changing film in cold weather, they can be worn all the time under whatever other pair you're using.

## **rucsac**

The choice here is between one specially made for carrying camera gear and normal mountain rucsacs.

Camera gear is heavy so bear in mind that whichever you choose make sure that the weight can be spread between the shoulders and the waist. If it is all carried on the shoulders it will be very uncomfortable after a few hours in the hills. To do this you need a well-padded waist belt, not just the flimsy strap that some rucsacs have.

I have tried several and have yet to find a camera rucsac that is anywhere near as comfortable to carry for many hours as my mountain rucsac. Consequently, I seldom use my camera rucsac.

I also avoid rucsacs with side pockets since, when these are full, they can knock you off balance when they brush against rocks and may even jam against rocks on steeper terrain.

## **rucsac liner & covers**

Rucsacs are NOT waterproof! You will need somewhere waterproof to store your camera gear. A heavy-duty plastic or nylon bag inside the rucsac, large enough to stuff in everything that you want to keep dry, is the simplest way to do this.

For really bad weather, a rucsac rain cover that fits over the outside of your rucsac will keep most of the rain from saturating your rucsac. I avoid using these unless the rain has closed in for an extended period because they make it difficult to get at your camera gear in a hurry. From experience, they also have a tendency to get blown off in strong winds in the Scottish mountains (!) so tie them on to the rucsac in some way or they could be expensive!

## **poles**

Ski or trekking poles are useful for support and preventing twisting and turning awkwardly on steep terrain. They also make good camera supports too (see Photography section).

## **trip planning**

I leave you to plan your overall trip, including learning the essential techniques for navigation and safety if you don't already know them. However, I offer here a few tips on planning some of the photographs.

The most basic tool to help is a map, preferably with a scale around 1:25000 so that good details are shown. Then find as many photographs of the area you are visiting as possible, from books, magazines and web sites, to give you an idea of good places to go and the types of shots you can take.

Now work out, using a map, where the best viewpoints are and start thinking about how you could do something different. Also, what time of day you need to be there? Bear in mind that the sun only approximately rises in the east and sets in the west. In fact, you may need to work it out more accurately than this since the sun rises anywhere from the northeast in the summer to the southeast in the winter. To help you there are sun position compasses available for the UK.

If you need a bit of help visualising the lie of the land, instead of just looking at maps then use Google Earth (free) or 3D mapping software (expensive!). Google Earth shows a 3D view of a computer generated version of the landscape. You can move around and even follow tracks and roads or ridges and other features on mountain ranges. You can also photographs taken by others from various viewpoints around your chosen area. From this you can roughly plan viewpoints for taking your photographs.

Don't be too distracted by software and computers though, nothing beats just getting out there taking pictures, whether planned or not!

Finally, a GPS can be programmed with exact positions for photographs, taken from map references, and can be used to guide you to the exact spot on the ground. They can also be programmed in the field to record the position of important locations that you want to return to at a later date, maybe a different time of year or when there is better lighting.

## Summary

Choose a camera that is suitable for what you want to do.

Carry it in a case in front of you so that it is always ready to use.

Buy the lightest equipment you can afford in order to reduce the weight that you need to carry.

Keep lenses and other equipment to a minimum.

Use a lightweight tripod with a quick-release head.

Take lots of film or memory cards with you and spare batteries.

Wear specialist outdoor clothing so that you are prepared for anything the elements will throw at you.

Always have a map and compass with you and know how to use them.

Overall, 'keep it simple, keep it light'.