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# equipment detailed list

Due to the nature of the mountain environment equipment and clothing must be suitable for its intended purpose. It must be light, remain effective when wet or iced and dry easily. It pays to be sure when buying that the product will not become redundant before it wears out. To help with your selection we have collated some notes which may help you save time and money. Bring your own clothing and wet weather gear and if you have your own equipment we suggest you bring it along to learn how to use it best.

## outer layers

- ☐ shell clothing: There are numerous fabrics which are both water resistant and breathable. These fabrics are expensive but can last for years if looked after well. Shell clothing should be tape sealed on the seams and be easy to move in and be put on and taken off when wearing gloves or mittens. PVC shell clothing (totally waterproof) is ok but will `sweat' as moisture cannot escape when you are working hard.

- ☐ jacket/waterproof shell: Look for a full front zipper model with a good attached hood with draw cord which will fit over a helmet. Some models have adjustable hoods. Preferably the parka should be long enough to extend below your buttocks. Obviously a technical mountaineering is ideal but many general purpose jackets are sufficient.

- ☐ over pants: These must have full length zips down the legs so they can be put on and taken off when you are wearing boots and crampons. The `bib' type are warmer as they extend above the lower back, but not essential. Make sure they have sufficient movement to enable you to lift your legs high.

- ☐ over mittens: There are several glove combinations which work. Popular with us is the pile(fleece) lined waterproof mitts. It is best that the liners can be removed to make drying easier. While belaying you will need a warm pair of gloves with a windproof shell. Not an essential item.

- ☐ gloves: The `ski' type finger glove can be handy when handling equipment. Some prefer lined leather gloves but they are difficult to dry. Bring extra pairs as they are not as warm as mittens. Keeper straps are excellent in keeping your gloves close.

- ☐ Gloves - inner: A light pair of fleece gloves are ideal – otherwise three pairs of polypropylene – they can be replaced regularly.

- ☐ gaiters: Full calf- length gaiters keep the snow out and should have a sturdy tie down system under the instep to stop snow creeping up into the boot.

- ☐ hat: Either wool or fleece and must extend over the ears and should not have a tendency to fly off in a strong wind. A polypropylene balaclava is good to carry as a spare

- ☐ sunhat: A baseball cap is good but won't protect your ears from the sun. A cotton scarf is a handy addition for ear protection. Full brim hats have extra protection but need to have a chin cord to stop them blowing away.

## mid layers

- ☐ fleece jacket: Should be the full front zip variety to allow ventilation. Zip up pockets help avoid losing items which are stored there.

- ☐ fleece sweater: A lighter weight sweater (100-200 POLARTEC) is a good addition if you need

extra warmth or it is not cold enough for your regular jacket.

- ☐ fleece pants: Preferably not too heavy a fabric as they can cause overheating.

- ☐ down jacket: Regarding the general query as to whether a down jacket can be substituted for a fleece one; we find that they tend to complement each other rather than act as a replacement, a fleece jacket is quick drying and breathes yet retains good insulation values and is ideal under an outer shell. A down jacket tends to come into its own at the end of the day when you want to put something really warm on but is still lightweight and packs down into your pack.

## underlayers

- ☐ shirt: Bring two high zip neck, full sleeve polypropylene or wool shirts. A long sleeve cotton shirt with a collar can be useful for those hot days on the glacier. Wool-based thermals such as Icebreaker provide high quality protection with reduced odour. Recommended thermal underwear brand: www.icebreaker.co.nz.

- ☐ long johns: Polypropylene or merino wool long johns are lightweight and provide a change if your fleece pants are wet or too warm. They provide additional warmth if worn under the fleece pants.

- ☐ underwear: Bring sufficient changes of your regular underwear.

## for your feet

- ☐ boots: Plastic rigid soled boots with removable liners are the status quo. These are produced by several manufacturers and are lightweight and stable. The hard shell accepts only the foot shape it was designed for so you may need to try on a few pairs to get the right fit. The fit should be snug with room to either tighten or loosen the laces to adjust fit. They must be comfortable to walk and climb in for many hours. The shells can be heat moulded by ski shops to ease out any minor hot spots. The boots must have a good sized welt at the back and front to accept `clip on' crampons. Ensure that you break your boots in by walking up, down and across hills for a few hours. Leather boots MUST be broken in and need to be rigid sole, crampon compatible. Coated with water proofing agent. First timer course participants should have clip on crampon compatible boots.

- ☐ socks: Thermal properties or merino wool are the best choice. Avoid cotton. Two sets of 2 pairs is ideal. A thin pair on your foot, followed by a medium pair will reduce the risk of rubbing (blisters).

- ☐ running shoes: Lightweight shoes are handy for lounging in the hut; and at the end of the day. If you are walking out of the mountains in a specific region you will need a trusty pair.

- ☐ crampons: The clip on type are the quickest to put on and take off which can save an appreciable amount of time on a mixed climb. The front points should stick out from the front of the boot about 2.5cm. Be sure to check the heel piece is compatible with your boots and stays in place when in the up position. A well adjusted `strap on' crampon can be more secure than a `clip on' but it takes practice to become efficient with them. If you're bringing your own crampons we highly recommend you have anti-balling plates attached to them.

## ice tools & technical equipment

A proliferation of good ice tools are available so it pays to know what you will be using it for when purchasing. Some tools are brilliant for vertical ice and useless for climbing snow and visa versa. Some tools are good for both.

- ☐ ice axe: For alpine climbing you need a straight shafted axe between 60 cm to 80 cm long. A longer tool is more helpful on moderate ground and even the most difficult climbs have approaches and descents for which this is helpful. Short axes with curved shafts and rubber hand grips are fine on hard technical ice climbs (45cm – 60cm) but not so suited to most alpine climbing. The head of

the axe should be comfortable to hold when in the walking stick mode and not have any protrusions which may dig into your hand. The pick can be curved or banana shape. Many tools come with replaceable picks so check that the bolts are tight. Shafts are either metal, or carbon fibre and some have rubber hand grips. The adze is still used a lot for chopping steps in ice and snow and must be on a good angle to do so. Some adzes are too dropped to do this but can be useful for climbing steep unconsolidated snow. The shaft must be smooth enough to be forced into the snow and not have protrusions which h can get caught up on a crusty snow surface. The spike at the bottom of the tool should be sharp, yet not razor sharp. A wrist loop is needed for support on the steeper stuff and you should be able to hold the bottom of the shaft with the sling tight.

- ice screws: We use Grivel Helix 20cm and Black Diamond Turbo Express 19cm.

- ice hammer: This can be a shorter tool (45 cm to 55 cm) as it is often only used on the steeper sections of a climb and for hammering in stakes and ice screws. Some people find it easier to have axe and hammer the same length on steep ice and others like a combination. Only experimentation can identify your own preference. The hammer head receives quite a lot of abuse on a climb and must be very secure with a good striking surface.

- helmet: The plastic helmets designed for climbing are lightweight and really only designed to deflect falling ice and rocks. They also protect the head in the case or a fall. Check the harness size and be sure it will adjust for when you wear your woolly hat underneath. Do not borrow a helmet made of plastic if its more than 4 years old. Composite (fibreglass/carbon fibre) helmets are also available but generally quite heavy and can be expensive.

- harness: The sit harness type is mainly used. These should be lightweight and adjustable around the waist and legs. A specially designed alpine harness is easier to get in and out of (which is important when nature calls) and they can be put on even when you have boots and crampons on. Many specialised rock climbing harnesses have fixed leg loops so will not do this. Comfort is essential. If you're bringing your own harness, please ensure you have a "cows-tail" of 1-1.5m length.

- carabiners: Bring your own 3 screw lock and 3 snaplink carabiners – otherwise use ours.

- prussic slings: 1 x 2.8m - 2 x 1.6 m (loop length). 6mm kernmantel. A double or triple fisherman's knot ties these into slings.

- tape slings: Regular climbing tape slings (25mm) at a variety of lengths (e.g. 1 x 1-1.5m loop length).

## sleeping & carrying

- bivvy bag: The best type are full goretex or similar. Some models have waterproof nylon underneath and tend to cause some moisture build up.

- sleeping bag: Down or synthetic, the down being less bulky but more susceptible to getting wet. Bring a bag rated to 3-4 season or better (approximately -5 degrees Celsius or near abouts).

- sleeping pad: A full length `carrymat' or `thermarest' or combination of carrymat and a short light weight thermarest provides the best results when sleeping on snow.

- backpack: There are many models available which are suitable. You must have at least a 65 litre capacity. Ensure the pack has ice tool attachments.

## bits `n' pieces

- headlamp: Black Diamond & Petzl have great headlamps. Bring two extra alkaline batteries for the trip.

- ☐ sun glasses: Preferably the glacier glasses type with side protection. The lens should be dark enough to withstand the intense reflection from the snow. Goggles for winter storm conditions.
- ☐ pocket knife: The Swiss Army type, Leatherman, or equivalent.
- ☐ stuff bags: Lightweight nylon bags with draw cords to store spare clothes etc. Bring 2 or 3.
- ☐ toilet bag: Bring a small flannel, small towel, some soap, toothpaste and toothbrush in plastic bags. Also any medication required. (Please inform your guide if you are on prescription medicine)
- ☐ sun block: A small bottle of maximum protection sun block and lip protection.
- ☐ water bottle: The wide mouth bottles are good for adding snow. Two 1 litre bottles are ideal. A camelback bladder is quite handy. 1.5 litre "Sprite" plastic bottle does a good job.
- ☐ plastic bowl, cup & spoon: A light non-breakable bowl and spoon. The cup can be tin or non breakable plastic.
- ☐ first aid kit: In a small stuff bag or container carry blister tape, 2nd skin, anti-flamm. Ensure contents are kept watertight.
- ☐ compass, note book and pencil: Any compass which is suitable for orienteering will do. Ensure your compass is suitable for the Southern Hemisphere. Notebook and pencil should be water proof or wrapped in plastic bags.

please check your equipment list for other equipment requirements not listed here