

Expedition Sleeping Bags

This month we brave seriously low temperatures to test eight sleeping bags that promise to be your trusted companion on trips to the high and cold regions of the world...

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Finding the right sleeping bag before you go off on a high-altitude trek or expedition is one of the most important kit choices you'll make. Get it right and you will give yourself the best chance of getting the sleep you need to recuperate after a long day's trekking or climbing; get it wrong, and you could be in for a miserable time as the twin perils of cold and tiredness conspire against you.

Your sleeping bag should be your cocoon to which you can retreat every night, a place to give you respite from freezing temperatures and biting winds; a space to recover from the days' exertions in and renew your energy for the challenges of the following day. It is also a place to keep your batteries, inner boots and drinks warm, dry out your socks and trousers, and while away time before lights-out reading a book or your Kindle.

So how do you ensure you choose the right bag for your needs? Well, there are a number of factors including warmth, weight, pack size, price and size/shape to consider when buying a bag, but perhaps the best way to start is by thinking about where you are going. How cold will it be at night; will you be carrying the bag, or will you have porters to carry it for you; are you particularly tall or broad; do you feel the cold easily. All these factors will have a bearing on which bag is most suitable for you, and as ever it is highly recommended to try bags out in a shop before you buy (or even better, borrow them for the weekend to field test).

There are several important specs that it's important to understand when buying a down sleeping bag – the fillpower and fill weight of the down fill, and the temperature ratings of the bag – and we'll take a look at these next.

DOWN AND FILLPOWER

Sleeping bags keep you warm not by heating you up, but by using the warmth your body generates and holding it inside the bag – with the filling of the bag acting as an insulator to stop the heat escaping. The amount of filling inside the bag, and the quality of it, determines

how good the bag is at doing this. Most of the bags in this test use high quality goose down as the insulation (duck down is an alternative) and the higher the 'fillpower' of the down used, the more it lofts and therefore is more effective as an insulator. You also need to look at the 'fill weight' quoted for the bag, as this is the actual amount of down it uses. If the design of the bag is sound, then a bag with a high fillpower and high fill weight should be warm – however this is not the whole story, as we will explain...

TEMPERATURE RATINGS

Although there is a standard test for measuring the warmth of sleeping bags – the EN13537 standard – not all manufacturers use this system, some instead preferring to use their own figure which is generally a temperature that one can enjoy a comfortable night's sleep.

The EN ratings quoted for (some of) the bags included in this test consist of a Comfort temp (which is the temperature a 'standard' woman can sleep in comfortably), the Comfort Limit (the temperature that a 'standard' man can sleep in comfortably) and the Extreme temperature (which is the lowest temperature a 'standard' woman can survive in the bag). However, it's not quite as simple as this as everyone's physiology is different and this is one of the reasons that some manufacturers don't use the EN rating system. Although EN ratings and manufacturers' own ratings are a useful guide, only by using different bags in different conditions will you get a firm idea about what you need compared to a 'standard' man or woman.

It is also worth remembering that there are lots of things you can do to maximise the performance of your sleeping bag. Try and get into the bag already warm, and do some exercise if needs be. If not already warm, move around in the bag once you get in to generate heat to warm the bag up. Pee before you go to bed, and if you wake up wanting to go don't delay, as a full bladder uses up energy. Sleep with only baselayers on if you can as your body will heat up the bag quicker, and using a sleeping bag liner will add warmth to the bag as well as help keep it clean. Finally, to maintain the performance of your bag it is vital that you store and care for your bag properly; this is beyond the scope of this article but do refer to the manufacturer's suggestions for caring for your new bag.

THE TEST

To properly test the capabilities of the sleeping bags in this review, we camped out at around 3,500m in the French Alps (on the Glacier du Geant) in temperatures as low as -25°C inside the tent, and temperatures outside of around -35°C and lower (with wind chill). Silk sleeping bag liners were used with all the bags, with only baselayers worn inside the bags. Turn the page to find out how each of the eight bags performed... **T&M**

THE TEST TEAM

Meet this month's Group Test team



WILL HARRIS

Will is a Chamonix-based climber with a penchant for hard Alpine routes, whether in the Alps or further afield in Alaska, Nepal or Patagonia.



AMANDA TRAVIS

Hailing from Ontario, Canada, Amanda is used to -30°C temperatures when hiking, so was ideal for helping test the bags in this month's test.



CHRIS KEMPSTER

T&M's Editor studied the weather forecasts for weeks to ensure that the bags in this test were only tested in the bitterest conditions possible.

Hunkering down for the night on the Glacier du Geant

“Your sleeping bag should be your cocoon to which you can retreat every night, a place to give you respite from freezing temperatures and biting winds...”

Group test

1. Alpkit Arctic Dream 1200 **£270**
2. Force Ten Altitude 1000 **£360**
3. Montane Deep Heat **£500**
4. Mountain Equipment Iceline **£650**
5. PHD Diamir 900 K-Series **£902**
6. Rab Andes 1000 **£620**
7. Sea To Summit Alpine III **£750**
8. Tundra Pure & Dry -40 **£550**

ALPKIT ARCTIC DREAM 1200 £270

ArcticDream gives a lot of bang for your buck



slightly lower than most at 750 fillpower – but because of the extra quantity of down inside (most other bags have 1000g or less of fill) we were expecting it to compare favourably with even some of the most expensive bags. The figures bear this out, at least, with Alpkit quoting the Lower Limit as -33°C and the Extreme limit as -58.6°C. The bag uses extra fill in certain critical areas, including the hood and the foot box, and a shaped shoulder baffle is designed to give better draught exclusion. Like many other bags, there are vertical baffles on the chest and horizontal ones on the lower legs and feet, which act to keep the down in the areas they are intended.

In use the Arctic Dream 1200 felt really warm with a good shape that contoured around the body to reduce cold spots but gave enough room to wiggle in. The neck baffle is really well padded, as is the hood itself, but we didn't find it quite as comfortable or as easy to adjust as some of the other bags. Getting in and out of the bag was easy enough, with the zip easy to operate even when inside the bag. We felt that the fabrics of the Alpkit didn't feel as durable as some of the other bags in this test, however for occasional use this would probably not present a problem.

Verdict: Fantastic value for money and warm but perhaps less durable than some other bags in the test

The Arctic Dream 1200 is the warmest model in Alpkit's range yet, despite this, it has a pricetag of only £270 making it the most affordable bag in

this test. As the name suggests, the Arctic Dream is filled with 1200g of down and with an overall weight of 1750g, it compares pretty well to other bags in the test. The quality of the down is

FORCE TEN ALTITUDE 1000 £360

Altitude 1000 uses Thermal Embrace System



down of a lesser quality – 650 fillpower – it doesn't deliver the same kind of warmth. Force Ten suggest it can be used down to about -17°C though, and that covers a lot of eventualities. The actual ratings are -15°C for Lower Limit and -36°C for Extreme, so if things do turn a bit nasty then you should at least live to tell the tale!

In use we found the Altitude easy to work with. Getting in and out of the bag was straightforward, with the anti-s snag strip working well. Once inside, it feels quite snug and narrow, though this is perhaps in part due to the 'Thermal Embrace System', an elasticated thread that makes the inner liner hug your body to reduce cold spots. Having experienced this type of system in other bags, the test team felt that it does help in warming the bag up quicker (and staying warm) although some people might find it a bit 'clingy' for their liking. The hood on the Altitude is pretty good, though we felt the neck baffle could be beefed up a bit. Overall, despite the bag not being in the same warmth league as other bags in this test (Force Ten did until recently make two warmer bags, but they are now discontinued) the Altitude 1000 is certainly a solid option for 4-season use.

Verdict: A solid bag that packs down well, but isn't suitable for the coldest of expeditions

The Altitude 1000 doesn't compete in terms of warmth with most of the other bags in this test, yet is significantly less expensive than many

and could be an attractive option for those going on cold – but not too cold – trips. The overall weight of the bag (1,700g) is comparable to the other bags we tested, but since it uses

MONTANE DEEP HEAT £500

Deep Heat has a distinctive 'flipper' foot box



Montane are relative newcomers to the sleeping bag market but have already made a good name for themselves in this area. The Deep

Heat is the warmest bag in their range and uses 1000g of 800+ fillpower goose down, and has an overall weight of 1610g – so competes with the best bags in this test. There's plenty of the useful

features that Montane products are well-known for, including a glow-in-the-dark zip pull, internal pockets for a water bottle and mobile phone, peak visor on its hood and soft microfleece in the chin and mouth area – but it's perhaps the 'flipper' foot box that is the most distinctive feature of the Deep Heat. This is a footbox that is smaller than the rest of the bag and is designed to reduce cold spots, along with the tapered shape of the lower half of the bag. In use we found this comfortable, yet it reduced usable space for keeping warm boot inners, clothes or other items overnight. The overall shape of the bag was great, though – quite snug, meaning it heated up quickly, but enough room not to feel claustrophobic. We found the double cords to adjust upper/lower face baffles slightly fiddly, but we did like the elasticated hood which help keep it in place on our heads when we moved around at night. One potential issue is that the Deep Heat only comes in one length, so tall people may well have to look elsewhere. However, despite not being completely convinced by the footbox, and the fact it perhaps needs a little more fill, we felt this was an excellent bag that offers good value.

Verdict: Warm and well-featured bag, though we felt the foot box could use a little extra fill

MOUNTAIN EQUIPMENT ICELINE £650

Iceline is an expedition workhorse



Mountain Equipment are well-known for their down products and have been at the forefront of the push towards ethically-produced down

in recent years, especially with their Down Codex scheme (ME are not alone in using ethically-sourced down, however, and we will be discussing this very subject in an upcoming

issue). The goose down used in the Iceline is sourced from the Ukraine, and Mountain Equipment say that the ratio of down to feathers is 93% to 7% (the standard is 90/10), and that they can guarantee that its quality is in excess of the 850 fillpower quoted in the spec.

Onto the bag itself though and you immediately notice how lofty the Iceline is once unpacked from its stuffsack. The outer fabric is very breathable yet offers good water resistance and feels one of the more tougher fabrics in the test. Mountain Equipment don't use the EN13537 ratings – instead they give a rating for a Good Night's Sleep: -25°C for this bag. We tested the bag in exactly that temperature and the Iceline coped well. The dual baffle along the main zip kept drafts out, while the zip itself is chunky and easy to operate. The hood, we felt, was not quite the best in the test – it feels like it needs a chunkier baffle under the chin – but is warm enough and easy to adjust around the face. While the Iceline may be bettered in some areas by other bags in this test, the overall package feels reliable and durable, with the Test Team feeling it would be a good choice for anyone looking for a bag that'll serve them over a number of cold-weather treks or expeditions.

Verdict: Warm and durable bag that will earn its keep over time



PHD DIAMIR 900 K-SERIES £902

Diamir uses 1000 fillpower down



expedition bags – yet the reality is you can create your own individual spec as every bag is made to order. The Diamir 900 K-Series bag (there is a 900 fillpower version also available) we tested uses 900g of PHD's ultra high quality 1000 fillpower down and has an overall weight of just 1570g. That's a really great weight for the -32°C 'typical operating temperature' that PHD quote for the Diamir. This comes at a cost of course, and the 900 is the most expensive bag in our test.

In use we found the Diamir easy to use; despite its loftiness, it was easy to compress down into its stuff sack, and getting into it and tightening up the neck baffles and hood was easy. The fit was snug enough to prevent any cold spots, yet big enough for some 'shuffle' room. The hood system, while not quite as good as the Rab's in our opinion, was one of the best in the test, and it felt one of the warmest bags too; this perhaps was due in some part to the double baffles along the main zip and the tapered shape, as well as the quality and quantity of the down in the bag. In fact, in a night of testing several of the bags in -25°C temperatures (inside the tent), the PHD was the one in which one tester finally got to sleep – so that must say something!

Peter Hutchinson Designs (commonly known as PHD) are a specialist company making a range of bespoke clothing and sleeping bags, and have a

great reputation having kitted out many leading expeditions over the years. Their website has an extensive range of bags to choose from – from ultralightweight models to the warmest

Verdict: Fantastically light and warm bag – though the price will limit its appeal, the standard Diamir is cheaper

RAB ANDES 1000 £620

Andes has a fantastic hood system



warmest expedition bags. The Andes 1000 fits near the top of the ladder (only the Expedition range is warmer), and uses 1000g of 800 fillpower hydrophobic goose down in a package wrapped up in Pertex Endurance. Rab don't use the commonly-used EN warmth ratings but say the Andes 1000 is designed for use in temperatures as low as -27°C (the Rab Sleep Limit).

In use we found the bag easy to get into and zip up and the hood arrangement was our clear favourite in the test. Using a standard two-cord system (one for the neck baffles and one for the hood) a fantastically snug fit is easy to achieve, with the neck baffles blocking off any drafts coming into the bag and the hood coming down nicely over the head and top of your face to give the 'cocoon' effect that is so welcome in extreme cold. On the down side, there is only one baffle along the main zip and we found the fit a bit on the roomy side (but it could be perfect for broader-chested types) which meant warming up the bag was a bit harder than some others. Overall though, this is a fantastic bag that will stand the rigours of expedition life, with the fit suiting some body shapes more than others.

Rab is another company with a terrific heritage in down products, and in fact the brand's origins stem from when founder Rab Carrington was stuck in

Patagonia without his equipment and started making his own sleeping bags there. Several decades later and Rab have a comprehensive range of sleeping bags from lightweight to the

Verdict: Warm and durable bag with a fantastic hood arrangement

SEA TO SUMMIT ALPINE III £750

Alpine III is easy to get into and has a really good hood



a good thing! This bag weighs in at 1610g yet packs in 930g of 850 fillpower goose down, giving it temperature ratings of -12°C (Comfort), -20°C (Limit) and -42°C (Extreme). That, on paper at least, makes it ideal for conditions on many high altitude treks and expeditions as well as winter camping in the UK and the Alps.

The Alpine III has a contoured mummy fit with an 'anatomically tapered foot box' which has room for a pair of boot liners to be worn inside; other features include an internal zipped pocket and a 3D NanoShell water-resistant outer. Although the Alpine III didn't feel quite as lofty as some other bags, we were impressed with its fit and warmth in use. The zipper and anti-sag baffle work well and it was one of the easiest bags to get in and out of (always important when you need a wee in the middle of the night!). Once inside the bag feels quite close and cosy, though not claustrophobic – and the hood arrangement was our favourite of any bag except the Rab. Like the Andes 1000 the neck baffle fits snugly under the chin, while the hood – which is smaller than most – cinches down perfectly over the face giving just enough room to see out of and breathe. Overall we had no major complaints with the Alpine III.

Sea to Summit are well-known in the UK for their range of trekking accessories, from cooking pots and utensils to drybags and waterproof cases, but

with new distribution in place we can expect to see more of their sleeping bags and sleeping mats in the shops too. If the Alpine III bag we tested is anything to go by, that can only be

Verdict: Fantastic fit and hood – a really nice bag, if a bit pricey

TUNDRA PURE & DRY -40 £550

Tundra bags use high quality down from Poland



natural conditions in Poland. The other stand-out feature is the low weight of their products (for the performance they deliver) and this can be seen across the range of bags they offer. We tested the Pure & Dry -40 which has a waterproof outer (to 10,000mm) and, despite outperforming our 'target temperature' of -25°C for this test, the overall weight of this bag is still only 1750g. For many, the fully-waterproof outer is not necessary and so a bag from Tundra's Pure range (which still has waterproof hood and footbox) would save both weight and money (e.g. the Pure -30 weighs 1390g and costs £460).

In use we found the Pure & Dry -40 incredibly lofty, so much so that – combined with its waterproof outer – we found it almost impossible to compress it into its stuffsac. A quick word with the manufacturer revealed the trick was to turn it inside out and this indeed made compressing it much easier. Inside the bag is incredibly warm and comfortable, with a double baffle preventing any drafts coming in via the main zip. We did find the zip a little difficult to at times, but this is the only niggle we had with the bag. We came away thinking that if we'd been testing the -30 Pure bag it could've been in contention for the Editor's Choice award.

Verdict: Warm, well-made and light – Tundra is a name worth watching!

This is the first product we've tested from Tundra, a British company that sources its down and manufactures in Poland – and we've been suitably impressed by

their wares! Tundra's mission, they say, is to produce ethically-sourced sleeping bags, and to this end they use a high-quality 880 fillpower down from geese and ducks that are living in

HOW THEY COMPARE

The vital stats of the sleeping bags featured in this month's test



Model	Price	Weight	Fill weight	Fill	Temp ratings (°C)	More info
1. Alpkit ArcticDream 1200	£270	1750g	1200g	750 fillpower goose down	Comf: -23.3, Limit: -33, Extreme: -58.6	www.alpkit.com
2. Force Ten Altitude 1000	£360	1700g	n/a	650 fillpower duck down	Comf: -8, Limit: -15, Extreme: -36	www.force-ten.co.uk
3. Montane Deep Heat	£500	1610g	1000g	800+ fillpower goose down	Comf: -12, Limit: -20, Extreme: -42	www.montane.co.uk
4. Mountain Equipment Iceline	£650	1970g	950g	850+ fillpower goose down	Good Night's Sleep: -25	www.mountain-equipment.co.uk
5. PHD Diamir 900 K-Series	£902	1570g	900g	1000 fillpower goose down	Typical operating temp: -32	www.phdesigns.co.uk
6. Rab Andes 1000	£620	1625g	1000g	800 fillpower goose down	Rab Sleep Limit: -27	www.rab.equipment
7. Sea To Summit Alpine III	£750	1610g	930g	850+ fillpower goose down	Comf: -12, Limit: -20, Extreme: -42	www.seatosummit.com
8. Tundra Pure and Dry -40	£550	1750g	1200g	880+ fillpower goose down	Comfort temp: -40	www.tundrasleepingnags.com

* Temp ratings EN13537 except where specified

FINAL VERDICT

The Group Test team's overall summary

Choosing a warm sleeping bag is as simple as checking the specs and choosing the bag with the highest fillpower and fill weight, right? Well not quite, as in practice there are other factors about the design that will affect how warm and practical the bag is in use – so in this test we were looking for the 'complete package' of performance and practicality that makes a great expedition bag.

If money were tight then the **Alpkit ArcticDream 1200** would be a great choice, and if money were no object the **PHD Diamir 900 K-Series** offers exceptional performance for its weight. However, for anyone looking for a warm and practical bag that has the durability to serve them on multiple expeditions, we narrowed it down to the **Rab Andes 1000** and the **Mountain Equipment Iceline**. In many ways they are very evenly matched, and personal preferences may decide which one is best for you (most obviously the fit). The Rab is a durable workhorse and has what we thought to be the best hood arrangement in the test; however the Iceline edged it – just – due to the overall package of warmth, durability and features, making it a bag you can rely on in the nastiest conditions. ■ **T&M**

