



BENDIGO BUSHWALKING AND OUTDOOR CLUB

The July 2021 newsletter included an article on sleeping bags by Andrew McLean. Unfortunately, your usually meticulous editor made a slight technical blunder: he left out half of the article. Oops. Oops indeed. Here is the complete article. Enjoy the read.

A Mathematical Approach to choosing Sleeping Bags

As an occasional Outdoor Ed teacher, and a self-confessed gear nut, I'm often asked by prospective overnight walkers, "I'm camping in winter. What sleeping bag should I get?" My answer goes something like this: "Firstly, you should have at least two, and here's why."

To start with, let's look at some details of a well known, fairly upmarket brand, *One Planet*. I've bought several *One Planet* bags (eight, if I can count correctly) for my family because,

a) they're good, and,

b) when I was officially an "Outdoor Ed professional", I got a good price. (*One Planet* sells a lot of gear to schools.)

In the table we see details of four bags that might appeal to a typical bushwalker. To keep it consistent, these are all "large", with 700 – 750 loft down. (Bungles, but not Camplites, are also available with a more expensive and higher quality 800 – 850 loft down.)

| Bag | Shell weight | Fill weight | Total weight (gms) | Comfort °C | Limit °C | RRP |
|----------------------|--------------|-------------|--------------------|------------|----------|-------|
| <i>Camplite 0°</i> | 450 | 310 | 760 | 7 | 0 | \$389 |
| <i>Camplite -10°</i> | 450 | 750 | 1200 | -4 | -10 | \$519 |
| <i>Bungle -4°</i> | 440 | 530 | 970 | 2 | -4 | \$499 |
| <i>Bungle -15°</i> | 440 | 850 | 1290 | -8 | -15 | \$639 |

There are two useful temperature ratings: "Comfort" and "Limit".

"Comfort" is where a "standard female" in thermals and socks will be able to sleep without feeling cold, and "Limit" applies to a "standard male" in thermals and socks. Sleeping bag manufacturers also include an "extreme" rating, which tells you that you probably won't die!

Of course there are many people who are not "standard", but these ratings allow bags to be compared, and if you take a thermometer on trips you'll soon work out where you are on the spectrum. For the record, I'm a very warm sleeper (several degrees better than "limit"), but I know lots of people who are much colder than "comfort". As an example, on a recent school trip I was in my *Camplite 0*, and a fellow teacher was in a *Camplite -10*. We both slept well, and I concluded that she was 10° colder at night than me.

Looking at the table, a *Camplite -10* has 440 gms more down than a *Camplite 0*, and costs \$130 more, or about 30 cents per gram. A *Bungle -15* has 320 gms more down than a *Bungle -4*, and costs \$140 more, or 44 cents per gram. Why these figures are so different is a good question!

The next thing to note is that a *Camplite -10* is 10 degrees warmer than a *Camplite 0*, and needs 44 gms of down for every degree it is warmer. A *Bungle -15* is 11 degrees warmer than a *Bungle -4*, but only needs 29 gms of down for every one degree warmer. This improvement is because although both designs are "tapered rectangular", the *Camplite* is quite a bit larger and roomier, and so the *Bungle* is more thermally efficient.

Many walkers have just one bag (we all started somewhere, after all) and it has to be a compromise. Let's imagine you are a "typical female", and you are the proud owner of a *Bungle -4*. From the table, this will go down to a comfortable 2°, but you're suddenly invited to a winter trip to Mt Feathertop, with temperatures possibly dipping to -8.

Needing to go 10° colder, you need a bag with 300 to 400 gms more down, so one option is a *Bungle -15*, at a RRP of \$639. But there is another, cheaper option, and one that needs careful consideration.

This second possibility is to buy the extra 300 gms of down in a second bag, and to sleep in both.

A *Camplite o* has a fill weight of 310 gms, so a *Bungle -4* inside a *Camplite o* will fit the bill nicely, and is \$250 cheaper.

The two bags together aren't as efficient as a pure snow bag (the second shell adds about 450 gms that doesn't do much to keep you warm) but on the other hand the owner now has a summer bag that is lighter, smaller to pack, and roomier inside than the three season bag which, much of the time, is too hot anyway.

I would suggest that for many *occasional* snow or serious winter campers, a second *light* bag is certainly far cheaper, and potentially far more useful, than a dedicated winter bag, while still offering serious warmth when needed. In winter, the two combined will be heavier, but in summer with one bag your pack will be lighter.

Worried about the cost? Remember that sleeping bags do wear out (my first down bag has long been retired) and if you have two, they both last twice as long.

To finish off, three is even better than two, and here is my setup, remember, I'm a very warm sleeper.



From left to right

- *Mont Nitro*: 160 gms fill, +5° summer bag.
- *One Planet Camplite o*: 310 gms fill, 0° spring and autumn bag.
- *One Planet Bungle -7*: 510 gms of 800 – 850 loft fill (= 590 gms of 700 – 750 loft), -7° winter bag.
NB. Note that the two light bags could be used in place of the third.

What do you think?

Andrew