

Trekking - then and now

Some years ago a friend of mine, let us call him Jon, decided to walk along the spine of the Americas. He did so in three 'bites', starting from Tierra del Fuego through to Panama; the following year from Panama to the Mexican border with the USA; finally the full stretch of the Rocky Mountains through to Alaska.

As a travel writer and an equipment specialist Jon had the pick of the equipment market, and he chose a lot of kit that would give him something to write about other than the weather and the scenery. Several manufacturers provided items that they wanted testing under truly arduous conditions in the long-term. And they were not disappointed with the feedback they received. There can be few development programmes as efficient as a few thousand rugged miles and a hundred or so nights under canvas to search out the potential defects in even the most innocuous gizmo, gadget or 'indispensable' widget.

Quite rightly, though, Jon refused to compromise at any time on three pieces of equipment - footwear, socks and his rucksac. Which made it all the more surprising when his back-up team for the second part of the trek received a Mayday call from somewhere near Mexico City - less than halfway into the project and slightly off the intended route - requesting a new rucksac. His brand-new, state-of-the-art model from one of the world's leading equipment designers and manufacturers had literally fallen apart. He had covered the fifty miles before being able to contact his support, using a backpack held together with a spare bootlace and a couple of pieces of fencing wire found along the way. Despite additional padding his shoulders were raw because the loss of hip support meant that the full weight of the laden pack was thrown onto the harness.

The manufacturer offered to replace the offending piece with another, fully tested, model. But there was little surprise when Jon politely declined (his trek diary was less polite). A new pack was flown out from England from another supplier and the walk resumed with only three days lost.

Moving on

The failures - and there were several - were mainly of stitching points where the back system met the bag. Mechanical failure occurred at plastic/metal interfaces as a secondary result and the whole assembly behaved like a house of cards. However, we are talking of events that happened over fifteen years ago; textiles, designs and hardware have moved on a long way and even the simplest rucksac should not subject the user to the same problems now.

Take the fabrics as an example. Cordura air-textured nylon fibre, invented by DuPont and now produced by Invista, turned backpack design inside out when it first appeared. Cotton duck went out almost overnight and manufacturers embraced the new technology with such fervour that the inevitable 'parallel development' fibre products appeared in a very short time-frame.

Cordura, of course, has developed well beyond its original parameters. It will now be found in market sectors as diverse as children's wear and luggage or street wear and hunting apparel. It can be



The Berghaus Bioflex back system uses a complex pivot assembly that works with the body and not against it.

Berghaus

woven or knitted. Mixed with complementary fibres such as cotton, Lycra or acrylics it develops characteristics in keeping with the 'guest' fibre - soft hand, low noise, quick-drying - but above all it retains the durability of the original.

In rucksac manufacturing other producers of air-textured nylon have found a secure niche - particularly in those areas where a high unit price is not necessarily equated with high performance. All the major brand owners tend to use Cordura for the premium products, and an own-brand development for the remainder. The unbranded products have also redeveloped over the years, with the majority more than capable of meeting the most stringent requirements of the trekking equipment manufacturers.

Distributing the load

Packs for the adventure travel market tend to be large and very technical in concept. Once upon a time they would be the guinea pigs for new harness and back system designs that would subsequently be applied across the board, but nowadays developments are much more application-specific and it's rare to find full carrying systems crossing sectors.

Although based in the UK, the packs designed by Berghaus Ltd can be found on every continent. For many years the company has relied on a semi-flexible assembly of vertical bars and hip-belt that has proved to be tough and adaptable, but perhaps lacking in that essential ability to mesh precisely with the human skeleton. Basically there is nothing wrong with the Berghaus Cyclops back system; but it can be improved and the work has been carried through in the form of its new Bioflex.

The Berghaus design team worked from the premise that most rucksacs act like a splint and severely restrict the hip and torso movement under a load that human beings need to maintain comfort and stability. The result, they said, was that backpacking is currently an awkward, uncomfortable and overly tiring activity.

The heart of the new Berghaus Bioflex system is the Bio Pivot, a plastic structure that acts as both a pivot and a vertical slide assembly to sit in the small of the back and facilitate the pack following the natural movements of the body. The whole of the assembly is infinitely adjustable for length, round the hips and across the shoulders.

Berghaus says that whether walking, scrambling or just climbing over wall, BioFlex provides the optimum load transfer and keeps the rucksac's centre of gravity in tune with the body, resulting in reduced fatigue and a very comfortable carry.

…and water stays out

A rucksac's capacity to absorb water has long been a source of wonder – and the driving force behind complex ingenuity – since man first took to carrying his worldly goods on his back. The favourite modern ploy has been the use of the ubiquitous plastic sack, providing an impervious liner at the cheapest possible price. Now the advent of water resistant zip fasteners and new construction techniques has provided an opportunity for 21st century backpackers to keep their kit dry and permanently segregated from the elements.

Berghaus Dry Fusion technology has been introduced for the winter 2004/5 season. Dry Fusion is a combination of construction techniques which is said to give rucksacs 100% waterproof seams.



Force Ten Expedition series packs features waterproof and water-resistant zips.

AMG Outdoor

Each fabric section is laser cut to fuse the fabric edges and create a stabilised panel. The panels are then thermally bonded through heat pressure to create a fully closed seam. Any seams that require stitching are taped and thermally bonded to ensure complete integrity. Berghaus says that the new technology not only makes the sac seams waterproof but also stronger and more versatile.

The Vango brand name is part of long-distance trekking lore. We have written in the past on the subject of its most famous product, the Force Ten expedition tent series, but the company added a range of rucksacs some years ago that have been steadily growing in both complexity and application. The latest addition is the Force Ten Expedition pack that Vango describes as 'waterproof'.

Rather than employing a radical departure from existing production methods, Vango has brought together a number of techniques that have proved to be effective in other aspects of the outdoor leisure industry. For example, the T-zip access to the lower compartment is a dry-suit zipper and therefore totally water-tight The main compartment uses a roll-top closure similar to those employed on kit bags for the kayak market, and all the zip fasteners on the side pockets and the lid are water resistant.

Whilst the body is constructed in 600D honeycomb ripstop polyester, the base of the sack is in tarpaulin grade PVC laminate at 0.7mm thickness.

The time gap between the adventures 'enjoyed' by my friend and those available to modern backpackers is probably in the order of fifteen years. But the development gap is a far greater stretch in credibility - possibly as great as that between the aircraft of the 1940s and those of 2004.