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Testing Mallory's Clothes on Everest

My arm arched over my head, and the old wooden ice axe bit into the snow of Everest's north ridge. Splinters of ice showered bright in the intense glare of the sun. I stepped up and felt the silk underlayers sliding smoothly beneath my Burberry jacket and plus-fours. Eighty-years-old, and yet brand new, the clothes were performing perfectly.

I've been to Mount Everest eight times now, and the reason is that I've been trying to prove something. When I was a 12-year-old boy I met my great-uncle Howard Somervell, one-time president of the Alpine Club. He told me an astonishing story of how he had gone to the then-unclimbed Everest in the 1920s with his friend George Mallory. After a disaster in 1922, when seven of their Sherpas died in an avalanche, they returned to try to climb the mountain in 1924. Howard Somervell had gone higher than he ever had before, when something happened in his throat. A piece of frostbitten larynx sloughed off and blocked his windpipe.

As a doctor he knew that unless he did something rapidly he would collapse in the snow and die. So as he started to black out he grasped his hands around his diaphragm and jerked upwards – a self-administered 'Heimlich manoeuvre'. Amazingly, the blockage shifted and he breathed easily again. When he shakily returned to the tents at Camp 4, he met Mallory coming up for his last attempt.

'Somervell, I've forgotten my camera. Could I borrow yours?' With Mallory was Sandy Irvine, at 22 the 'experiment' of the 1924 Everest expedition.

Rather unwisely, as it turned out, great-uncle Somervell handed over his camera – and Mallory and Irvine walked into history. They disappeared into clouds near the summit and were never seen alive again. And by that simple act of passing the camera over to Mallory, my great-uncle gave me a purpose for life, a quest that has occupied me for more than 30 years. For he had a hunch that Mallory and Irvine had climbed to the summit.

'If someone could find that camera of mine, and develop the film inside, he might be able to prove that the mountain was climbed in 1924, before Hillary and Tenzing in 1953.'

I have had some success in my quest. In 1999 my BBC expedition found Mallory's body. He was face down at the bottom of a scree slope, having clearly fallen a long way. He had a broken leg and an injury to his head. The American climbers the BBC had recruited to do the search removed all his clothing and possessions, then buried his body in rocks and read over it the Committal Service that I had brought to the mountain with me.

They also published pictures of the body without informing me or my colleagues, an act which enraged and upset mountaineers all over the world.

The one thing Mallory did not have on him was the camera. This puzzled me. Had he handed it to Sandy Irvine and, if so, why? Could it be to take the one conclusive picture of a successful mountaineer – the photograph of him on the summit? There were other clues. His snow goggles, vital to avoid being blinded by the intense light of high altitudes, were tucked away in a pocket. This suggested to me that they were returning after nightfall – a very likely cause of an accident. I also carefully examined the thin cotton rope that had been tied around his waist. It was so slender that you wouldn't tie your pyjamas with it. It was cleanly snapped, a couple of feet from Mallory's body.

I started to build up a picture of the accident, and it looked very similar to other, more recent, fatal accidents on the mountain: the two climbers reach the summit very late. Mallory passes the camera to Irvine and he quickly snaps a shot of his legendary companion crouched against the wind, with the sun setting fast behind him. They head down the summit ridge and quickly descend into the shadows between the rocks. They are moving as fast as they dare but in their hearts they hug the amazing fact: they've done it! The world's highest mountain is climbed! Their names will resound forever! They will, but not for the reasons that they think.

Mallory's lightly nailed boot skates over a treacherous rock, he nearly recovers himself ... but he falls. And everything changes. His body starts the long sliding fall down the north face, his rope snaps over a sharp edge and he is gone forever.

The one clue I felt that I hadn't examined was the clothing. Many armchair pundits claimed that, as they were wearing only tweeds, Mallory and Irvine could not have survived the cold of the summit, and therefore they couldn't have done it. And yet the clothing recovered from Mallory's body didn't look like tweed. What was it?

Because one of the 1924 group pictures showed the expedition members at base camp wearing casual clothes, it was assumed that this is what they wore to the top. Far from it. In an extraordinary project funded by the Heritage Lottery Fund, two enthusiasts recreated every stitch of Mallory's clothing by using the fragments recovered from the body. With forensic techniques they replicated two suits, one to Mallory's measurements and one to mine. This all cost around £30,000. The plan was to put one suit on exhibition and for me to test the other suit on Everest in spring 2006 to see if the clothing was adequate for a successful summit attempt.

And so I found myself opening the aluminium flight case at advanced base camp and taking out Mallory's new clothes. First impressions were of beautiful natural materials: silk shirts in wonderful muted colours, hand-knitted socks and cardigans, and a jacket and plus-fours made of gabardine. This is a tightly woven cotton fabric, proofed against wind and rain, and in

this case a shiny green. There were something like eight layers of material around my waist and yet it all felt warm, light and comfortable.

The first thing to report is how extraordinarily comfortable they were. Like most mountaineers I am used to synthetic outdoor clothing: polypropylene underclothes and outer fleeces which are bought pre-sized off the shelf. As a result they never quite fit properly. They are unforgiving in stretch and begin to smell unpleasant if worn for more than a couple of days on a climb. I also find their 'next to skin' feeling is slightly unpleasant: a harsh synthetic sensation.

By contrast the Mallory clothing was made to fit me. This meant that the shirts didn't ride up, exposing my kidneys when I stretched, and the whole ensemble felt of a piece when walking. But, more significantly, the materials are natural, and this makes a huge difference. The first time I noticed this was when I started using the Shetland wool scarf while travelling through Tibet at the beginning of the expedition. By wrapping it around my face at night I was able to breathe warm moist air instead of the cold dry air of the high plateau. The material remained comfortable on the skin whereas a synthetic scarf would not.

When I first put on the clothes I also found they felt warm instead of the slightly clammy feel of the synthetic alternative. Later, when exposed to a cutting wind blowing off the main Rongbuk glacier, I found the true value of the gabardine outer layers. These resisted the wind and allowed the eight layers beneath to trap warmed air between them and my skin.

Any disadvantages? Yes. The buttons would be hard to manage with cold fingers. I think it is significant that Irvine, Mallory's climbing companion, had fitted the recently-invented zip-fasteners to his high-altitude clothing. I guess that the clothes were put on at the beginning of the summit attempt and most buttons were left fastened. Flies? My guess is that these were left undone, as the layers of clothing would interlock. Next is the simple fact that these clothes do not provide the insulation and protection of a full down suit – you would struggle to survive a bivvi near the summit. In my opinion they are warm enough to get you to the summit if you keep moving fast – but not if you have to stop. In 2006 many climbers were waiting in a queue below the ladder up the Second Step, and some of them suffered serious frostbite injuries because they got cold.

I asked Russell Brice, the expedition leader, to put on the clothes that he wears to the summit, and he came out of his tent looking like a polar bear. He had fleece underwear and a huge hooded down suit, several inches thick. As he said: 'The main problem with climbing Everest nowadays is pissing through a six-inch suit with a three-inch penis.'

We climbed up on to the East Rongbuk glacier and did some tests. First I cut some steps with the 1920s ice axe. I immediately found that the layers of silk that I was wearing slid easily against the wool layers, giving me great freedom of movement.

Then I reached up to take a hold on the ice above my head. The patented pivot sleeve of the Burberry jacket allowed me a full reach without dragging the shirt-tails out of the breeches. Before too long I was feeling almost too hot. Not for nothing was this gear developed for polar expeditions.

After extensive testing of this sort I was very confident that Mallory and Irvine could have reached the summit comfortably wearing this clothing. And I am eternally grateful to the Mountain Heritage Trust, Professor Mary Rose and Mike Parsons for dedicating so much care to their project. They have given me more evidence to support my belief that Everest was climbed in 1924.

Having tested the clothing, I have a feeling that I might know what happened to the missing Sandy Irvine. Appalled by the sudden death of his hero, he may have wandered along the route, calling his name. It gets darker. He decides to try to survive the night by squeezing into a crevice among the rocks. As a last thought, perhaps he tucks the camera securely into an inside pocket, thinking that someone one day might discover what they had achieved. Death by cold is a kind friend.

Sandy Irvine maybe hallucinated for a few hours, then slipped away. I'm sure now that his clothes, although good enough for going to the summit, could never have kept him alive during the night. A friend of mine, Mark Whetu, barely survived this ordeal wearing modern clothing. He lost all his toes.

A couple of years ago I interviewed an old Chinese climber in Beijing who claimed that he had seen Sandy's body in 1975, crouched in the crack in the rocks. We searched for three expeditions, but never found him. I am still looking for him – and the camera he may still be carrying.

Further reading: Mike Parsons and Mary B Rose, *Mallory Myths and Mysteries: The Mallory Clothing Replica Project*. Mountain Heritage Trust, p48, 2006, £4.95.