So near but so far

After 100 days trekking across the Arctic sea, the Top of the World expedition was forced to capitulate. Team photographer **Martin Hartley** talks to Gill Mullins about the wonders of their extraordinary journey

PREVIOUS PAGE
The effects of a rapid spring melt in the Arctic made progress slow and treacherous

RIGHT
Pressure ridges in the foreground silhouetted by the ever present sun of the Arctic spring

OPPOSITE PAGE
Two expedition members drive their sled dogs onwards. Despite reaching the North pole the team had to abandon their trek 190 miles from Ellesmere Island

In mid-September, as England sweltered in an Indian summer, NASA highlighted melting of the Arctic sea ice on an unprecedented level, the rate accelerating beyond anything so far recorded. The ominous reports certainly weren't news to geographical photographer and polar veteran Martin Hartley. Only three months previously he had witnessed the frozen Arctic Ocean disappearing beneath his feet.

Martin had been team photographer on the Adventure Ecology 'Top of the World' expedition, which had set out on 3rd March from Cape Arctichesky in Russia to cross the Arctic sea ice to Canada via the North Pole, using skis, kites and Canadian Inuit dogs pulling sleds, with the ultimate aim of raising awareness of global warming's impact on this unique and fragile ecosystem.

After 100 days' hard slog across 770 nautical miles of some of the most extreme terrain on earth, the four-strong team were forced by rapidly deteriorating ice conditions to evacuate by air while it was still possible to get out without having to call on the Canadian army. It was 8 June, exactly six weeks after they had celebrated reaching the North Pole, and they were just 190 nautical miles from their goal of Ellesmere Island.

'Cracks open up beneath your feet; pressure ridges start rising in front of you like great garden walls of ice, and then all hell breaks loose'

'Giving up, after having put so much physical and emotional effort in, was awful, the worst moment of the entire trip,' recalls Martin with palpable regret in his voice, 'but the decision was obvious – there was no way we could go on safely, and having to be rescued later on would have put too many people's lives at risk. As we flew back to Canada and saw the amount of water below us, we knew if we'd continued, the only way out would have been by submarine or ship.'

His breathtaking, often chilling photographs – over 3,000 in total – show in stark detail the degradation of the ice, far in excess of what should be expected of an Arctic spring, and it's an irony not lost on Adventure Ecology that the very effect they had sought to publicise – the shrinking of the ice cap due to escalating climate change – was what scuppered their expedition.

It's also telling that while the team comprised four polar veterans – team leader and Adventure Ecology founder David de Rothschild; Paul Landry, who holds the world record for the highest tally of successful North and South Pole expeditions; Landry's daughter Sarah who, at 18, became the youngest person to ski unsupported to the South Pole in 2004; and Martin, who was expedition photographer for de Rothschild and Landry in 2004-5 when they set a new world record for the fastest trans-Antarctic crossing – they were all caught out by the conditions they encountered. 'We'd planned to do 12 miles a day; we averaged seven,' Martin admits. During the two days prior to evacuating they managed just two miles in 22 hours because the ice was so bad.

How did these conditions – including fog so thick that it was 'like living inside a glass of milk' – affect Martin's photography, which was so crucial to publicising the expedition and its climate-change message? With 18 years' experience behind him of capturing the most inaccessible, remote and challenging landscapes on earth, including 10 previous polar forays, he is not the sort of photographer who gets stressed by bad weather. 'When you're on location, you have to adapt the way you shoot to the conditions you've got, because you can't do anything about them.

'Being on the Arctic Ocean for so long is very different to just being in the Arctic,' he stresses. 'A frozen ocean is moving all the time. When it's a full moon, the whole ocean surface moves. Cracks open up beneath your feet; pressure ridges start rising in front of you like great garden walls of ice, and then all hell breaks loose. Sometimes leads (fractures in the sea-ice cover) form, exposing the water, which then freezes, then it flows again, then it opens again, creating a huge jumble

Inuit Sled dogs

Historically, the breed of dogs used by the team was called Esquimau, which was anglicised to Eskimo. They are a pure breed and not related to Huskies.

Out of respect for the wishes of the Inuit people the term 'Eskimo' has been dropped in favour of calling the breed the Inuit Sled Dog or

Arctic gear

Shooting in the Arctic means plenty of forward planning – like coming up with a way for Martin's Nikon D2X to cope with the extreme cold, and maintaining a power supply for it in a place where there's not enough sunlight for a portable solar panel to recharge batteries.

Specialist electronic engineering company Pulsar Design came up with an ingenious solution: removing the camera's internal battery from its casing and replacing it with a heater, then using lightweight Lithion batteries as a power source. Martin kept these warm in a holster under his arm and a lead ran from them down the inside of his sleeve. When he wanted to use the camera, he simply plugged the lead into the camera to power it and the heater up.

'The second major problem was storing the pictures,' says Martin. 'Portable storage devices need batteries and I couldn't take enough for those and the camera. And they aren't necessarily tough enough to be chucked on the back of a dog sled and be bashed about over lumpy ice for three months.' Instead, Fuji supplied 22 two-gigabyte CompactFlash cards, which could function down to about -20°C, plus eight specially-made four-gigabyte cards which were good for -40°C.

Global warming – the facts

The Arctic is warming twice as fast as global averages, and 2005 was the warmest northern polar summer for 400 years. On 13 September NASA released stark new details of the meltdown, which scientists say is the 'strongest evidence yet in the Arctic of global warming'.

- Perennial sea ice up to 3m thick shrank by 14% between 2004-5 – 14 times the previous rate.
- The decline in ice cover is 280,000 sq miles – almost the size of Turkey
- The melt rate of winter sea ice has massively accelerated, from an average of 1.5% per decade since 1979 to 6% over each of the last two winters – that's 30 times faster.
- The melt period is lasting for two weeks longer each year due to summer sea ice decline (around 10% per decade) – which means the winter ice cover is going to get worse.

If these trends continue, the summertime Arctic could be ice-free within a decade – and the ice cap could have disappeared by 2030. And because ice reflects the sun's heat back into space and the dark ocean surface absorbs it, the less ice there is, the faster the planet could heat up.

The team's sled dogs provided Martin with countless ideas for pictures. 'I wasn't a dog person before I left, but I am now,' he says.

of ice. If the pressure is released when you're in the middle of it, you're going to fall through.' Martin went in up to his armpits a couple of times but, although he lost a battery, he managed to safeguard his Nikon D2X, which was slung round his neck for ease of access.

'It is quite scary, but you tend to know when you're about to go in, so you get ready for it,' he says. 'In the Arctic, unlike when you're mountaineering, you can usually see the problems coming way ahead of you, so you can prepare yourself. But you really wouldn't want to be in this environment without anyone experienced with you – you wouldn't last long.'

What this meant in practical terms was that there was no time for setting up photos, as was possible in the Antarctic where, on the 2004-5 expedition, Martin took 14,000 pictures in five weeks, compared to 3,200 in the Arctic in three months. 'That's an indication of how hard it is to shoot out there,' he says. 'One huge problem is that if someone's on one side of a pressure ridge and you're on the other, if the ice opens up one of you could be stranded, so you can't afford to hang around.'

While the Arctic landscape is awesome, the theme tends not to vary much day to day – snow, ice, sky, fog – so having the sled dogs added an extra photographic dimension. 'I wasn't a dog person before I went, but I am now,' Martin laughs. 'They really did have their own personality and character. Shooting the dogs in action was a godsend; they were always doing something, whether it was working hard, playing, fighting or courting – one female came back and promptly had puppies. But just being out there on assignment was a gift.'

Although Martin's commitment to documenting the most remote parts of the planet has taken him to some stunning places – Yemen, Zanskar, Northern Siberia and Purros in the Namib Desert – the Arctic remains close to his heart. He is due back three times in 2007, including a commission to photograph polar adventurer Rosie Stancer's solo attempt on the North Pole and an expedition across Baffin Island for the Mitchemp Trust to raise money for underprivileged children. 'I love the Arctic; I'd quite happily spend all my winters there. The landscape of the Arctic Ocean in particular is unlike anywhere else. It's an amazing feeling to know you're standing on top of the world.' ■

Adventure Ecology

Adventure Ecology is planning six more high-profile expeditions over the next three years to promote awareness of global warming, via an online educational resource featuring an expedition website plus a teachers' section with lesson plans and a rather splendid interactive site especially for children. 'The main aim of this first mission was to test if Adventure Ecology worked as a concept and to educate children about climate change,' explains Martin. 'In that respect it was a complete success – we had two million hits in 14 weeks.' See www.adventureecology.com