

In quest of the vanishing ice

In May this year two seasoned explorers will set out on the first summer crossing of the Arctic ice cap ever attempted. Their goal – to help assess the impact of global warming on the Pole. Continuing his profile series of Rolex Award Laureates and their remarkable causes, **Julian Cribb** reports.



Lonnie Dupre will attempt the first summer crossing of the Arctic Ocean to raise awareness of global warming.

©Rolex Awards/Marc Latzel

Among the world's endangered ecosystems few are disappearing as rapidly and on so vast a scale as the Arctic. It has recently been estimated that 40–50 per cent of the Arctic sea ice now melts each summer – but no-one knows for sure.

One man determined to find out is Arctic expeditioner Lonnie Dupre. In May he and fellow explorer Eric Larsen will set out, on skis and by kayak, to attempt the first summer crossing of the top of the world. They hope that the sheer distance which they must cover by sea – unprecedented in history – will alert humanity to the peril and pace of global warming.

This vision and determination have been acknowledged by Dupre's 2004 Rolex Award for Enterprise. The international distinction aims to encourage a spirit of enterprise in visionary individuals around the world, providing the financial support and recognition for projects that advance human knowledge and well-being.

The 43-year-old Dupre is a veteran of the Arctic: from 1997–2001 he and Australian explorer John Hoelscher made the first journey around Greenland, in three stages, an adventure that placed enormous demands on their stamina.

Dupre and Larsen plan to move out onto the sea ice from Cape Arctichesky, Siberia, and travel via the North

Geographic Pole to an intended landfall on Ellesmere Island, Canada, about 100 days later.

Wearing robust, single-piece thermal dry suits designed to breathe with their exertions in the humid, –10°C to +40°C conditions, the pair will paddle and haul their two kayaks across a hazardous, fog-shrouded vista of fractured sea ice and open water in the Arctic Ocean.

Their lightweight 'slaks' (or sled-kayaks), made from ultra-high-density polyethylene, are designed to be hauled over solid ice. Laden with provisions for four months, each slak will weigh nearly 140 kg. Trekking 10 hours a day, much of it over sea ice, both men will consume 5500 calories of rations a day – twice the average intake. Their aim is to make 21 km per day through a jigsaw landscape of pack ice with jagged ridges thrust upwards by pressure. Myriad intersecting channels of water separate the constantly moving pieces. At least 30 per cent of their journey – possibly more – will be by water, among rounded ice pans marshalled by ocean currents. They will have to skirt treacherous zones of thin ice and aggregations of floating, pulverised brash ice.

Throughout the trek, Dupre and Larsen will take snow and ice samples. Paul Mayewski, director of the

Global Climate Change Institute at the University of Maine, will later analyse the samples for pollutants and atmospheric indicators of climate change.

Global warming is most pronounced in polar regions. Dupre says he is shocked at the continuing loss of the Arctic Ocean's sea-ice cover in summer. Average Arctic summer temperatures have risen by about 1.2°C per decade since the 1980s. The ice's original thickness has been substantially reduced in the past four decades. The exact extent of its summer area reduction is unclear: scientific estimates range between 15 and 50 per cent. Dupre hopes to shed light on the mystery.

'Recent findings indicate that sea-ice cover in the Arctic is declining by nine per cent per decade. Scientists suggest that this reduction in sea-ice cover could lead to even greater warming in the Arctic, as open water absorbs more incoming solar radiation, and hence heat, than does ice,' he says.

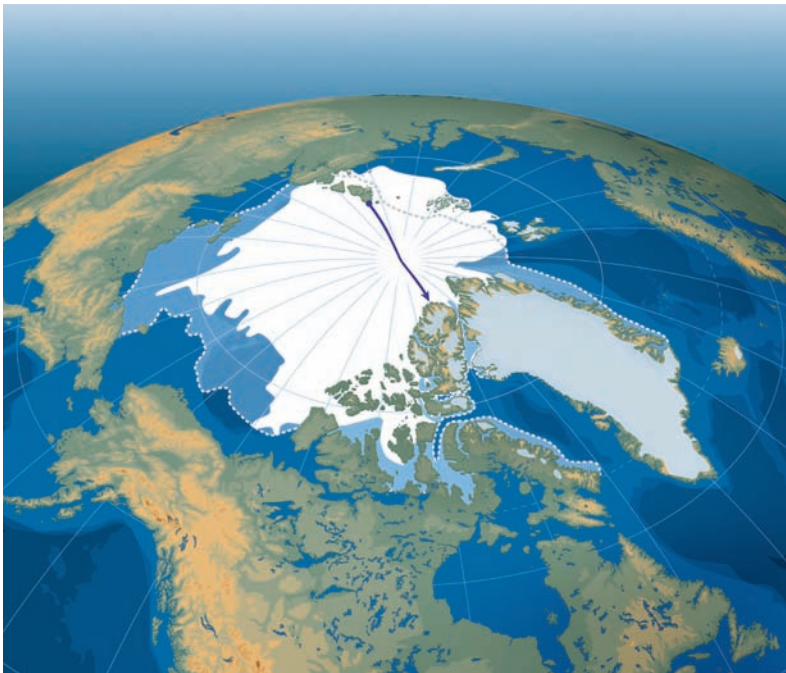
'Can you imagine a more powerful image to portray the dramatic effects of global climate change than two kayakers floating in the middle of the Arctic Ocean – a place most people envision as completely frozen?'

During the northern winter the pair of explorers trained hard, hauling heavily laden kayaks over frozen lakes in Canada and dragging heavy truck tyres through the woods. Dupre prepares meticulously for his expeditions, choosing only the best clothing and equipment.

Dupre and Larsen will paddle and haul their kayaks across treacherous fractured sea ice and open water.

© Rolex Awards/Marc Latzel





The arrow across the North Pole shows the 2253 km expedition route Lonnie Dupre and fellow explorer Eric Larsen will take during the first summer crossing of the Arctic Ocean. By kayak and on skis, with no external support, the explorers will leave Cape Arctichesky, Siberia, in May 2005 and travel via the North Geographic Pole, and expect to reach Ellesmere Island, Canada, 100 days later. The white area indicates the extent of the Arctic ice cap in September 2003. The pale blue area, enclosed by a dotted white line, shows how far it extended in September 1979. Between these two dates the Arctic Ocean summer ice cap decreased by about 18 per cent. © Rolex Awards/Léonie Schlosser

Right: Dupre is a veteran of the Arctic having already circumnavigated Greenland.

©Rolex Awards/Marc Latzel

Far right: Years of preparation are required for this undertaking; Dupre and Larsen train by hauling kayaks over frozen lakes.

©Rolex Awards/Marc Latzel



Right: Education is important for Dupre's project; here he (left) and Larsen (right) speak to children at Sakku School, Coral Harbour, Canada.

©Rolex Awards/Marc Latzel

Far right: Dupre will be accompanied on the expedition by Eric Larsen, an American explorer.

©Rolex Awards/Marc Latzel



Exceptional endurance, mental toughness, resourcefulness and a well-honed ability to distinguish between calculated risk and foolhardiness complete a survival package that has taken him safely through 17 years and 25 000 km of trekking on skis, kayak, dog sled and on foot.

Dupre's thirst for exploration is unquenched, but his seventh expedition has a purpose beyond the personal challenge. He will film it for a documentary and publish a book to draw attention to the impact of global warming on the Arctic Ocean. Online college classes will be designed and offered through Hamline University in St Paul, Minnesota, on subjects including global warming, Arctic ecology and the history of Arctic exploration. People worldwide will be able to track their progress through updates on a website, www.oneworld-expedition.com.

Dupre attributes his obsession with the top of the world to 'Arctic fever' – a chronic but addictive malady that draws its victims repeatedly back to the icy wastes.

He is also moved by his friendship with the Inuit people, his love of their culture, and by his concern for other hardy but vulnerable denizens of the Arctic Circle: polar bears, seals, caribou and birds like ptarmigan and ravens.

Any loss of the Arctic Ocean's ice cover is bad news for polar bears in particular. The amphibious predators are powerful swimmers, but no match for seals in open water. They hunt by ambush, waiting by holes in the ice for their prey to surface. Dupre says the bears will starve and could become extinct if summer sea ice disappears completely by 2050, as some scientists are predicting. By



late summer, the polar bears roaming the seven million square kilometres of pack ice out on the Arctic Ocean between Canada, Greenland and Siberia are lean and hungry. Their natural curiosity and hunger make them a threat to any human entering their realm.

Lonnie Dupre laments the fact that the bears are increasingly at risk as global warming erodes the Arctic Ocean's summer ice cover. Nevertheless when he and Larsen attempt to cross the Arctic Ocean, they will take measures to avoid any misadventure that might augment the bears' standard diet of seal flesh.

Dupre and Hoelscher had an unnerving polar bear moment during their Greenland circumnavigation. Confined by ice to a narrow inshore channel, they watched in alarm as two large bears playing on a nearby hillside spread-eagled themselves and slid down to investigate the unfamiliar sound of plastic paddles hitting the ice.

'By the time we untangled our rifles, they had moved downwind to get our scent,' Dupre recalls, adding with a smile, 'Apparently we smelled so bad after weeks without bathing that they ran in the opposite direction.' Possibly, he adds on a more serious note, the bears were simply not hungry.

On the Arctic Ocean, there will be no sled dogs to wake them and keep bears at bay. 'The bears are amazingly unafraid,' says Dupre. 'A bear will stalk the perimeter until it gets a whiff downwind, then come right in. After hauling a 300-pound sled for 10 hours, we'll be sleeping pretty hard.'

'We'll set up a perimeter trip wire, linked to flares on bamboo stakes. If a bear runs into the wire, it will set off



a flare, and the bang should wake us. We'll be carrying lightweight firearms for protection, and a flare pistol. You have to be prepared.'

Dupre will indeed be prepared. In summer 2004, he travelled across the Arctic Ocean by icebreaker to preview the ice conditions. Barring the unforeseen, he is quietly confident his expedition will succeed.

Polar bears rely on sea ice to hunt, so the shrinking of the ice cover reduces their food supply.

©B. & C. Alexander/Sutter

More information:

The Rolex Awards for Enterprise: www.rolexawards.com



The Canadian Arctic. No explorer has ventured into the Arctic in summer when open water covers at least 30% of the surface. ©Rolex Awards/Marc Latzel