

Media information

March 31 2005

20 Arctic facts

Team Pink Lady® are participating in one of the hardest races on earth. Below are 20 Arctic facts that help explain what they are likely to encounter on their adventure.

1. During the winter months the Arctic ice cap covers approximately 10 million square miles (16 million sq km) and its grip reaches far enough south to envelop the upper reaches of Canada, Alaska and northern Siberia. In the summer months the pack ice reduces to a surface area of about 5½ million square miles (9 million sq km). Whereas the ice in Antarctica is several miles deep, the ice above the Arctic Ocean is only 5 metres thick at most. In some places, it measures only a few inches.

2. Unlike at the South Pole, there is no landmass beneath the ice of the North Pole. The Arctic ice cap is instead a constantly shifting pack of sea ice, which simply floats atop the Arctic Ocean.

3. The North Geographic Pole (also known as True North) is the northernmost point on the earth's surface. Located at a latitude of 90° North, it is the position on the globe where all lines of longitude converge. The North Geographic Pole also marks the northern tip of the earth's axis, around which the planet rotates.

4. The North Geographic Pole should not be confused with the North Magnetic Pole, which currently lies some 500 miles (800 km) further south. The earth's magnetic field is similar to that of a bar magnet and, as such, it has two magnetic poles, one in the Canadian Arctic (referred to as the North Magnetic Pole) and one south of Australia (known as the South Magnetic Pole). At the North Magnetic Pole the earth's magnetic field is directed vertically downwards into the surface of the earth, rather than running across it. The North Magnetic Pole is the eventual destination for any traveller following a northerly compass bearing.

5. The position of the North Magnetic Pole varies from year to year due to a constant drift in the earth's magnetic field. It is currently moving slowly across the Canadian Arctic and so the Geological Survey of Canada keeps track of this motion by periodically carrying out magnetic surveys to redetermine the Pole's location. A 2001 survey determined that it is currently moving in a northwesterly direction at approximately 25 miles (40 km) a year. Team Pink Lady and the rest of the Polar Challenge participants will be heading for the 1996 location of the North Magnetic Pole.

6. Although there is still considerable dispute over the issue, Robert E. Peary is generally recognised as the first person to have reached the North Geographic Pole. On 6th April 1909 Peary, Matthew Henson and four Eskimos achieved this gruelling feat after a 37-day expedition using dogsleds. On 9th May 1926, Richard Byrd and Floyd Bennett became the first people to reach the Pole by airplane, whilst the US nuclear submarine *Nautilus* became the first vessel to pass under the North Pole, approaching from beneath the ice in 1958.

7. Whilst it is Antarctica that is home to the penguin, the Arctic is the domain of the polar bear. *Ursus maritimus* has no known predators and as such, it poses a considerable threat to polar explorers, whose only real defence is a shotgun. Polar bears not only actively hunt their prey, they also have a phenomenal sense of smell, detecting potential targets up to 20 miles away. They have also been known to swim great distances and some have been sighted up to 600 miles (800 km) from land. Team Pink Lady have been taught how to scare away polar bears as part of their training.

8. Temperatures in the Arctic can drop as low as -35°C, although the windchill factor causes such measurements to plummet even further. The Arctic regions also spend half of the year in darkness, followed by six months of constant light. This is due to the position of the earth's axis in relation to the sun. Sunrise at the North Pole occurs on the spring equinox, around 21st March, from which point sunlight is then continuous throughout the summer, so Team Pink Lady will be travelling in constant daylight. The sun climbs higher in the sky each day until the

summer solstice on about 21st June. After this point the sun slowly sinks in the sky until it drops below the horizon on the autumn equinox (around 21st September). Twilight prevails until early October, at which point full darkness takes hold again until the following spring.

9. Whilst the ice in the Arctic is always dynamic, constantly expanding and shrinking in keeping with the seasons, it is now generally accepted that the ice cap is definitely melting. In the 1950s the minimum surface area of summer ice started getting smaller and by the 1970s the maximum surface area of winter ice had also begun to decline. The thickness of the ice has also been recorded as waning. The 2004 Arctic Climate Impact Assessment determined that the ice in Greenland and the Arctic is melting so rapidly that half of it could be gone by the end of this century. The results would be catastrophic and low-lying lands as far away as Florida could be inundated by rising sea levels.

10. The famous northern lights can be seen most clearly in Arctic regions. The *aurora borealis* appears as clouds and streams of multi-coloured lights in the night sky and is the result of charged particles from the solar wind streaming down the earth's magnetic field lines and then colliding with the upper atmosphere. Some of the energy released during these collisions becomes visible light, treating onlookers to a visual spectacular.

11. The average human person needs to consume between 2,500 and 3,000 calories a day to maintain a healthy diet. On polar expeditions individuals can require as much as 6,000 calories to function. This is not just because of the exertion involved in pulling a sledge; polar explorers can burn calories at a rapid rate just through non-stop shivering. Since it is physically impossible to carry enough food in a sledge to provide 6,000 calories a day, it is not unknown for polar travellers to lose several stone in weight over the space of a long-distance expedition. Team Pink Lady have enjoyed plenty of apples as part of their training diet and also taking freeze-dried Pink Lady apples with them to mix into porridge to be enjoyed on their expedition.

12. The diminutive Arctic Tern (*Sterna paradisaea*) undertakes the world's longest migration, travelling almost from one Pole to the other. The bird breeds in the Arctic Circle, but migrates during the Northern Hemisphere winter to the edges of the Antarctic ice pack. Only once temperatures in the Arctic rise to a comfortable level again does it return to breed once more. The annual journey is some 21,750 miles (35,000 km), almost equal to flying all the way around the world.

13. Each year between April and May intrepid competitors take part in a grueling 360-mile (500-km) race across the Arctic. The Polar Challenge takes between two and four weeks to complete and sees teams racing on skis and dragging 120 lb sledges behind them. The aim of each team is to reach the North Magnetic Pole, although the current finish line lies over the 1996 position of the Pole for safety and logistical reasons. Team Pink Lady is the only all-female team taking part in the 2005 race and Tori James is the youngest female competitor.

14. The constant exertion involved in dragging a sledge through a polar environment can result in extreme dehydration very quickly if an individual does not consume enough water. On Arctic expeditions polar travelers ideally need to drink four litres of water a day, but even this presents problems, since snow has to be melted to create water. Large amounts of fuel are needed to melt the snow and this contributes to the overall weight of the sledge, which in turn contributes further to the risk of dehydration. Getting this balance right is by no means easy.

15. Frostbite is a continuous danger when travelling in Arctic regions. Once flesh is exposed to sub zero temperatures, ice crystals can develop inside human tissue in just minutes, causing irreparable damage. In extreme cases, the affected areas have to be amputated to avoid gangrene, blood poisoning and subsequent death.

16. Snow blindness is another potential danger facing anybody travelling over large expanses of ice and snow. UV rays from the sun do not just enter the eyes directly, they are also reflected off of the ground's surface, exacerbating the problem. Too much exposure to ultraviolet rays can cause both extreme discomfort and damage to the eyes, rendering an

individual temporarily blind. The only real solution is to wear protective eye cover in the form of glasses or goggles.

17. Individuals who spend prolonged periods in polar regions have also been known to experience temporary visual problems on their return to civilisation. Since there are no trees or rocks on the floating pack ice and there is quite literally nothing to focus on amongst the endless miles of white snow and ice (which in turn blend into the white horizon), the muscles controlling the eyes' focusing system can become weak with disuse. This makes it hard to focus on objects more than a metre away when the eye is eventually presented with stimulation at the end of an expedition.

18. Fog, blizzards and white-out conditions are also a constant threat in the Arctic and can reduce visibility to absolute zero. It is not unknown for people to venture out of their sleeping bags to go to the toilet, lose their bearings and then fail to find their tent again. In extreme cases, people have been found dead once the blizzard ends, just a few metres from their tents.

19. Despite an apparent scarcity of food, the Arctic is home to an abundance of wildlife. Reindeer, walrus, foxes, hares, wolves, musk ox and killer whales all reside here, as well as the countless species of migrating bird that visit the region on a seasonal basis.

20. The long dreamed-of Northwest Passage, an Arctic shipping route between the Atlantic and Pacific Oceans, could well be free of ice and open for summer travel before the end of this century. The shortcut passes below Iceland and Greenland, through Arctic Canada and along Alaska's north coast. Scientists disagree on just when the shrinking ice cap could make this route feasible, but if it happens, ships travelling from Europe to Asia could shave some 4,000 miles (6,400 km) from their current route through the Panama Canal.

www.pinkladypolecats.com

www.polar-challenge.com

- Ends -

High resolution photographs of the Pink Lady® PoleCats available on request.

Please contact Elodie Massol (020 7569 3043 / elodie@yesconsultancy.com) or Tina Fotherby (202 7569 3042 / tina@yesconsultancy.com) at The YES Consultancy for further information or interview requests.