

Why would anyone volunteer to spend a year in isolation in the harshest environment on earth?

Graham Blyth ^{who served} ~~was~~ ^{as a meteorologist during} the 27th South African Antarctic Expedition ~~in 1986~~ ^{to} the ice continent ~~in 1986~~. ~~He cannot~~ cannot answer simply. He can hold your attention for hours as he enthuses about life on the edge, relating spine-chilling incident after incident and shamelessly bragging about how his equipment stood more than a test of time.

One piece of equipment was Graham's Rolex Explorer I which he acquired just days before setting off on the SA Agulhas in January 1986 for the SANAE base. The watch not only ticked effortlessly through repeated exposures to minus 40 deg C but kept time while Graham worked extended periods with a jack hammer during repeated operations to uncover supplies and equipment which, during a single storm, can be buried metres below the icy surface.

The SANAE base, constructed of ARMCO corrugated steel, is situated 13 kilometres from the edge of the main ice shelf on a glacier and is moving approximately 60 metres a year towards the edge. The snow and ice accumulates on and around the base at a rate of one to two metres a year and the base, built to replace the old one in 1980, is currently 14 metres below the ice surface. Although the living quarters are heated, the temperature in the ice passages between sections of the base regularly drops to minus 40 deg C during the winter months.

The emergency base is a new design - built above the ice - and raised each year by the SANAE team so that it remains about eight metres clear of the ^{ice} ground. During the 1986 expedition, the team worked around the clock for 10 days to clear the base. Then a storm came up and buried their work in a matter of hours, leaving the men to start from scratch. Such is the nature of Antarctica - breathtakingly beautiful but untamable.

While the summer months in Antarctica are 'pleasantly warm at - 7 deg C', according to Graham, winter is a time when the last rays of the sun set at the end of May and only peak over the horizon again at the end of July.

Says Graham: 'During this period we experienced some of the lowest temperatures recorded over the past six years - well into the minus 40s. These low temperatures took their toll on cameras and watches alike.

'However, my Rolex kept on ticking and came into a class of its own when we braved the coldest nights to venture out to photograph the magnificent auroral displays.

'Capturing these southern lights on film is extremely difficult, requiring long exposures in freezing conditions. I attached my watch to the tripod and the luminous numerals and hands made it easy for me to do accurate time exposures. In fact, mine was the only watch to work satisfactorily in the extreme cold.

'Everyone wears goggles to combat the glare on the ice. Even through the strongest polarising lenses the dial of my Rolex was

easy to read, unlike many of the other makes of watches - particularly the digital ones."

Winter in Antarctica is a whole season of stormy night-time when for the most part team members are confined to the base for days or weeks at a stretch. It is during this time that team members suffer from "mid-winter insomnia" or "big-eye".

"I suffered from "big-eye" for a while and sometimes did not sleep for four days while at other times I slept for a few hours at a time," says Graham. "When you wake you do not know if it is AM or PM - or even the date - because you could have been asleep for 12 hours or 12 minutes."

"So if anyone should take a Rolex down to the Antarctic next time, I would suggest they take the Explorer II with a date and a 24 hour hand."

Unfortunately Graham's watch began gaining time at a rate of 60 second every 24 hours during the winter months which meant it had to be reset from two radio time signals every third day in order for him to make accurate meteorological readings. By the end of October the watch was gaining as much as 2 minutes every 24 hours but fortunately Graham joined a team which set out on a 250 kilometre journey to the summer scientific base during the spring and no longer needed to make accurate readings.

On his return home, Graham found there ^{reasons for the} were two ~~measures~~ ^{ed.} which he ~~could have taken to prevent the watch from gain~~ ^{ing} time. First, he had not had sufficient time before leaving for Antarctica to allow the watch to "run in" and be reset and secondly, the use of a special lubricating fluid (used on Everest Climbs) within the watch would have obviated the time gain.

Midwinter in the Antarctic: the last rays of the sun disappeared over the horizon at the end of May, and the continual darkness is accompanied by temperatures of minus 40 degrees Celcius. Sometimes the sky is lit by the swirling green lights of the magnificent auroral displays.

Graham Blyth, who served as a meteorologist during the 27th South African Antarctic Expedition to the ice continent in 1986, ventured out in temperatures of less than -40 deg C to photograph these magnificent Southern Lights. He says, "It was here that my Rolex Explorer I really came into a class of its own. Capturing the Southern Lights on film is extremely difficult, requiring long exposures in freezing conditions. I attached my Rolex to the tripod and the luminous numerals and hands made it easy for me to take accurate exposures. In fact, mine was the only watch to work satisfactorily in that extreme cold."

Graham acquired his Rolex Explorer I just days before setting off on the SA Agulhas for the long trip south. The SANAE base, where he and the rest of the team lived for a year, is constructed from ARMCO corrugated steel, and is situated 13 kilometers from the edge of the main ice shelf. It is built on a glacier and, as a result, is moving at approximately 60 metres a year towards the edge of the ice. The snow and ice accumulate on and around the base at a rate of one to two metres a year and the base, built in 1980 to replace the old one, is already 14 metres below the ice surface. Although the living quarters are heated, the temperature in the passages between sections of the base regularly drops to -40 deg C during the winter months.

In addition to the main base, there is an emergency base which is designed very differently. It was built above the surface and is raised by each new SANAE team so that it remains about 8 metres clear of the ice. During the 1986 expedition, the team had to work around the clock for ten days to clear the emergency base. Then a storm built up, undoing their hard work in a matter of hours! Such is the nature of the Antarctic - breathtakingly beautiful but untamed and untameable.

Graham's Rolex survived the Antarctic with him. It ticked effortlessly in the freezing cold, and even kept time when he worked for extended periods with a jackhammer during repeated operations to uncover supplies and equipment from the metres of snow which cover them after every storm.

He points out an added advantage of the Rolex: "During the summer months everyone has to wear goggles to cope with the glare from the ice. Unlike many of the other makes of watches - particularly the digital ones - the dial of my Rolex was easily read, even through the strongest polarising lenses.

Apart from the freezing cold and continual storms, winter in the Antarctic brings other problems. Team members are confined to the base for days or weeks at a stretch, and during this time they suffer from 'mid-winter insomnia' or 'big eye'.

"I suffered from 'big eye' for a while and sometimes did not sleep for up to 4 days while at other times I managed to sleep for a few hours," says Graham. "When you wake up you don't know if it's AM or PM - or even the date - because you could have been asleep for 12 minutes or 12 hours. And you haven't even got the sun to orient you! So I would suggest that anyone taking a Rolex to the Antarctic should take the Explorer II with the date and a 24-hour hand."

Graham did experience one problem with his Rolex. During winter it began gaining time at a rate of 60 seconds per 24 hours and had to be reset from radio signals every third day to enable him to take accurate meteorological readings. By the end of October it was gaining as much as 2 minutes every 24 hours. Fortunately he then set out with half the SANAE team on a 250 kilometre journey to the summer scientific base, and no longer needed to take accurate readings.

On his return home, he found that there were two reasons for the watch gaining time. Firstly, he had not had sufficient time before leaving for the Antarctic for the watch to 'run in' and be reset, and secondly, a special lubricating fluid (also used on Everest climbs) should have been used in the watch.

What is it that makes anyone volunteer to spend a year in isolation in the harshest environment on earth, where even summer temperatures are only about -7 deg C? Graham has no simple answer; except that it was a dream he made come true. He can hold your attention for hours as he enthuses about life on the edge of survival; describing magnificent sights, spine-chilling incidents, and how he and his equipment - including his Rolex Explorer I - stood more than a test of time.

Slide NumberDescription

1	Aurora Australis with moon rising
2	Aurora Australis
3	Aurora Australis
4	Moon above Meteorological huts
5	Walking on sea-ice between icebergs
6	Emperor penguins on sea-ice
7	Making friends with Emperor penguin
8	Windscoop on side of mountain
9	Blue-ice pressure ridge
10	Digging out radiation equipment
11	Emperor penguin
12	Probing for crevasses at edge of main ice-shelf
13	Ice stalactites/stalacmites in abandoned SANAE base
14	Releasing weather balloon
15	En route to mountains
16	Storm tent on sledge
17	Moon with "moon dogs"
18	A storm starting
19	Ice bergs