



# SKIP NOVAK

THE RETREAT OF GLACIERS ON SOUTH GEORGIA POINTS TO CLIMATE CHANGE AND A RECENT VOYAGE THERE HELPED GATHER MORE COMPELLING SCIENTIFIC EVIDENCE

**T**here is no better way to appreciate climate change as a reality than returning year on year to South Georgia, that most celebrated of sub-Antarctic islands in the Southern Ocean. For whatever reasons (and there are possibly many in an environment like this with temperatures for the large part of the year hovering around 0°C), whether the temperature is just below or just above makes all the difference.

In the last three decades that I have been coming here the trend has been upward and this is backed up statistically as the island had been occupied by Norwegian and English whaling companies since the turn of the last century into the late Fifties and, since then, by a British Antarctic Survey field station. The carefully kept records tell the tale of an increase in temperature over the medium to long-term, no doubt about it. That is scientific fact and if you were coming here over the years you would have to be partially blind not to notice the dramatic changes in the landscape that are so evident.

For example, the Neumayer Glacier that I camped on

and walked across to attempt to climb the highest peak of the Three Brothers in 2002 is now open ocean – the glacial front has retreated six kilometres from its position on the 2004

## ‘THE RECORDS TELL A TALE OF INCREASED TEMPERATURES’

edition of the South Georgia map, compared with where it is now on the latest edition, released in September. This is an extreme example, but the retreating glacial trend is typical of nearly all the glaciers on the island, especially on the warmer north side.

Interestingly, though, on the southern Antarctica facing side that takes the brunt of the weather first, there is more snowfall, so the recession is less severe and actually advancing in a few places. But this must be considered an anomaly rather than contra-argument in the climate change debate.

In consequence, those of us using South Georgia as a playground looking for snowy conditions with colder temperatures to ski and climb have been tending to come

here earlier during late winter/early spring to run our expeditions, in spite of risking dark nights offshore, which can be nerve-racking if ice is reported en route. Not long ago we would have been guaranteed a metre of snow on the shorelines from September into October. This has not been the case during the past two seasons. This year in September the shoreline and foothills were in a high summer condition. This is probably a short term climatic hiccup, but it makes you think – and worry.

Because the sub-Antarctic islands are on the edge of the Antarctic ecosystem, climate change scientists are keen to learn as much as they can from these fast disappearing glacial systems. Ice cores can tell the story. In October, we hosted for the third time since 2012 a team from the Climate Change Institute of the University of Maine in the United States. The institute is one of the leaders in the field of interpreting historical climate information from ice cores.

I was seconded as a ‘grunt’ to assist three researchers working on the Szielasko Ice Cap on the Barff Peninsula, attempting to drill ice cores 30m down to the bedrock and also chainsawing ice pits at various elevations to take block samples.

This vestigial glacier (our team says in 20 years it will all be gone) might help not only to determine the age of the ice laid down but also, by chemical analysis, tell the story of historical weather patterns (and other catastrophic events like volcanic eruptions that can mask weather patterns), which could help predict future climatic conditions.

Unfortunately, we were, for a variety of reasons, only partially successful in getting the samples, but what we do have we hope will provide the justification for another reconnaissance voyage in two years’ time.

Finally, getting to the point of this column, it must be said that it is possible for a small yacht like ours to provide logistic support for what are significant scientific pilot projects, especially in a remote location like South Georgia, where there is not even an airstrip.

Also, there is now a growing trend among philanthropic superyacht and megayacht owners to donate time on board their vessels for scientific projects and research, helicopters included.

I can’t think of a better way to use your vessel. ■