

consistently shown a cooling trend while others see some of the fastest warming anywhere on the globe. Those contradictions have occasionally stumped the science community, but were enough to vindicate skeptics in disproving climate change. More often than not, the conclusions are disconnected from the issue. Take the sea ice extent: an increase has been noted—minute but persistent—for the last few years. This phenomenon, which bears little consequence on the general state of Antarctica, is ,









Dead clam on the Antarctic Peninsula, an area warming five times faster than global average **Climate Change**



The experiences I bring back tell the story of a changing environment which, the more I think of it, looks a lot like us: defiant, fragile and fleeting.

confusing the media and leaves the science community slightly perplexed. It is generally thought that a shift in wind and ocean current behavior is likely to be the cause. It should be said that Antarctica doubles in size every winter and, per usual, just about 100% of its sea ice melts entirely in the summer cycle. This qualifies the relatively negligible impact of this increase on the continent (or the globe) from a climate perspective. The seasonal Antarctica sea ice bears little resemblance to its northern perennial counterpart: the former has no role in reflecting sunlight since its extent develops in the Austral winter's dark months, when sun is non existent. In the north, the year round sea ice, which has lost over 35% of its extent in the last 15 years - not to speak of its loss in thickness—is responsible for reflecting incident light and heat radiation from the sun with its surface in the summer months. This helps regulate the global average temperature at around 14C degrees (57.2F) and rising. The slight increase in sea ice in the south does in no way balance the deficit in the north. More confusing still is the increased accumulation in some areas high on the Antarctica plateau, and even cooling in some sectors. While scientists suggest that this may result from warming trends in the coastal regions leading to added evaporation and further precipitation (following a

traditional hydrological cycle), some are quick to seize on the opportunity with a "gotcha" strategy to stir up a debate. In reality, there is no debate anymore than you fight science with opinions. Additionally, beside the peninsula's record warming trend (1F degree per decade over the last 50 years), 2014 saw the most alarming study released by NASA focusing on West Antarctica and its impact on global ocean rise. Long term monitoring of the Pine and Thwaites glaciers have revealed glacial loss to the sea from below the surface given the melting at the glaciers' grounding line from deep warm ocean currents. The accelerated incidence of calving events is believed to result from the warming of ocean temperatures reaching West Antarctica. NASA has unprecedentedly qualified these events as "unstoppable" given the downward geological slopping under these glaciers. The resulting melt is expected to raise global sea levels by four feet within the next one to two centuries. This new finding adds to the Intergovernmental Panel on Climate Change (IPCC)'s projection of one to three feet by 2100. These numbers do not factor the exponential feedback on the East Antarctica and Greenland glaciers in. But they are enough to flood the South East Asian delta, responsible for 50% percent of global rice production. The melt of the West Antarctic glaciers gives a first ,





Climate Change



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glimpse of what scientists have cautioned could lead to runaway global warning, and the food shortages that this will entail. In other words, we're in for a wild ride. And there is no plan B.

I have often been asked what appeal lies in spending months in isolation in this harsh desert. While there is no simple response, the best I can come up with is to seek a clearer and more profound understanding of the self. When traveling in a place so antagonistic to human life, you'd be surprised by the answers that come from questions you had not sought to ask. Eventually it would seem, everyone there is forced to ponder the same questions: Who am I, and why am I here? In the white stark vastness of the great South, answers come easier because there aren't as many places to hide.

The time I spent in the extreme latitudes gave me a deeper perspective of the subtle variations taking place at the hands of climate change, and the future we face as a species. If you want to know what will happen to the world in 30 to 50 years, you need look no further than the poles. The experiences I bring back tell the story of a changing environment which, the more I think of it, looks a lot like us: defiant, **>**







Short of riding a rocket to outer space, Antarctica is the closest you'll get to visit another world. fragile and fleeting. The breakdown of the West Antarctic glaciers serves to remind us that powerful and gigantic though the ice is, it remains as vulnerable and ephemeral as we are. High on the plateau however, Antarctica is quick to point out that we are no more enduring than the 30 million species inhabiting this Earth: the ice was there long before all of us, and will remain long after we're gone. Isn't it time our attitudes should reflect that reality before it is cold-heartedly taken away from us?