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Steven Hurst

**Editorial Assistant**  
Jasmine Delves

The Campus  
4 Crinan Street  
London N1 9XW, UK  
Tel: +44 (0) 20 7833 4000  
e: nature@nature.com

**SPRINGER  
NATURE**

An uninterrupted thread of discovery, triumph, and mystery—tempered by disaster, exploitation, and misery—courses through humanity’s interaction with Antarctica. The relationship is riven with conflict, and heroic interventions are often required: reminiscing about unimaginable suffering and bleak prospects, geologist and explorer Sir Raymond Priestley once said “...get down on your knees and pray for Shackleton”. Now, even though Shackleton continues to inspire, the situation is largely reversed. Rather than humans seeking salvation from Antarctica’s harsh caress, it is Antarctica that must seek protection from humanity.

This Nature Insight on Antarctica peers into these many facets of Antarctica’s past, present and possible futures. In the first Review, Ed Brook and Christo Buizert synthesize 800,000 years of climate and atmospheric history to depict Antarctica’s response to and influence on the broader climate system. Steve Rintoul then reviews the vast Southern Ocean, and shows that localized processes—such as eddy-driven mixing sourced from current interaction with bottom topography—drive the overall system.

An alarming amount (more than 50 metres) of sea-level rise lurks in the Antarctic Ice Sheet, and a first step in understanding the ice’s fate is knowing the current mass imbalance. In an Analysis, the IMBIE team brings together the lengthening remote sensing record and reveals an accelerating trend of ice loss. Then, in a Review, Andy Shepherd, Helen Amanda Fricker and Sinead Louise Farrell discuss the tightly interlinked processes governing recent trends in Antarctic sea ice, ice shelves and grounded ice.

Finally, in a Perspective arising from a 2014 panel discussion attended by winners of the Tinker-Muse Prize for Science and Policy in Antarctica, Steve Rintoul and colleagues present two visions of Antarctica in 2070: in one, humanity’s appetite for resources and fossil fuels continues to increase, and governance weakens; in the other, world development proceeds with a sharper focus on conservation, mitigation, and strong governance.

The Insight brings together much of our understanding of natural science in and around Antarctica, reveals our current impacts on it, and outlines a pathway through which the ghost of Shackleton might not need to be raised, on behalf of an entire continent.

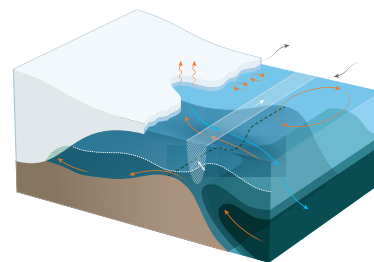
**Michael White**  
Senior Editor

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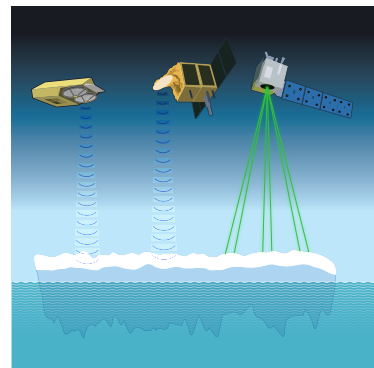


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