SCI NEWS



Rice feeds half the world. Climate change's droughts and floods put it at risk

Rice provides sustenance for billions who have no alternative, and climate change threatens to slash production. Growers will need to innovate to provide an important crop as climate whiplash brings drought and floods to fields worldwide.

'Ice Rivers' invites you to get to know our world's melting glaciers



We have always been a sucker for glacier lingo, whimsical words for a harsh landscape gouged, smoothed and bulldozed by ice. Moulins, drumlins, eskers and moraines. Cirques and arétes. Cold katabatic winds blowing down a mountain, huffed from a glacier's snout and said to be its spirit. Joanna Wadham's *Ice Rivers: A Story of Glaciers, Wilderness, and Humanity* loses into this duality of whimsy and barefoot, cheerfully pulling readers into this strange, icy world.

Wadham, a glaciologist at the Bristol in England, confesses t give readers a sense of contex which she knowingly unfoldi her writing, glaciers have bee snouts and veins filled with w with them, I feel like I'm amon writes.

"It is, in many ways, a *love an the glacier, she reasons — ge love them — is key to trying t*

Accordingly, the book's chapters are anchored by site, and each chapter documents a different field expedition or series of expeditions to a particular glacier. Wadham takes us from the Swiss Alps to Norway's Svalbard islands, from India's Himalayas to Antarctica's McMurdo Dry Valleys. It's a breezy read, with an eager party host who (*"let me introduce to you my friend the glacier, I think you two will get along"*). These recollections are honest, funny and poignant, and reveal how the highs and lows of fieldwork are inextricably intertwined.

While describing each site, Wadham dives into an engaging mishmash of personal recollections about her fieldwork, snippets of accessible glacier and climate science (I now know that those rivers of ice have three different manners of flow), a dash of alpine and polar exploration history, and many bits of local color. (Sci the 8,000-year-old woman, folk the Red, Svalbard's many polar bears and wild Patagonian horses all make an appearance, not to mention the mummified corpses of seals and penguins littering the Dry Valleys (*Ick*, I'd be).



Interesting thread winding

An interesting thread winding through the book concerns how the focus of glaciology as a field has shifted through time. After several years of not winning grants that would allow her to continue working on Svalbard, in 2016 Wadham got the opportunity to go to Greenland instead. "Valley glaciers were no longer considered quite as cutting-edge to the research council funders," she writes. "Instead, glaciologists had become obsessed with the vast ice sheets," for the potential of their meltwaters to raise sea

glaciers' impacts on ocean life and the water cycle, opening up an opportunity for Wadham to study Patagonia's fast-changing glacial region. Where the book really comes alive is in its vivid snapshots of a scientist's life in the field: making a bleary-eyed cup of coffee in Patagonia using a thin sock as a filter; fearfully skittering across fragile fjord ice on a ski. Does

'Ghost tracks' suggest people came to the Americas earlier than once thought



Footprints left behind by prehistoric people may be some of the strongest evidence yet that humans arrived in the Americas earlier than previously thought. Over 60 "ghost tracks" — so-called because they pop up and disappear across the landscape — show that people romped through what's now New Mexico 23,000 to 21,000 years ago, geoscientist Matthew Bennett and colleagues report in the Sept. 24 Science. If true, the fossil findings would be definitive proof that humans were in North America during the height of the last ice age, which peaked around 21,500 years ago.

At White Sands National Park in New Mexico, Bennett, of Bournemouth University in Poole, England, and colleagues used several methods to calculate the ages of the newly described tracks, including radiocarbon dating of aquatic plants embedded in and between the footprints.

"One of the beautiful things about footprints is that, unlike stone tools or bones, they can't be moved up or down the stratigraphy," he says. "They're fixed, and they're very precise."

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