



Greenland's ice cap, pictured here in a photo by US clothing retailer and research patron Gary Comer, serves as a vast climate-change archive.

CLIMATE CHANGE

# Lands' End to the Arctic

Henry Pollack relishes a climate-science narrative with an intrepid and passionate businessman at its heart.

Two narratives make up the fabric of *The Fate of Greenland*. The polar-research perspectives of well-known climate scientists form the main thread, woven through with a posthumous tribute to Gary Comer. Comer, founder of US clothing manufacturer Lands' End, became a patron of climate science in his later years, in a most unusual way.

A native of Chicago, Illinois, Comer had as a young man crewed on sailing vessels large and small, developing a passion for remote places. In its early days, Lands' End — founded in 1963 — reflected his abiding love of sailing, offering sails, lines, hardware and nautical apparel for day-sailors on Lake Michigan and owners of luxurious ocean-going yachts. Three decades later, Comer's business success enabled him to resume exploration of the world with his own ship, *Turmoil*, a modified and well-appointed 46-metre North Sea trawler.

Comer took *Turmoil* to some extraordinary places. In 1997, he envisioned a trip to the Russian Far East

[NATURE.COM](http://NATURE.COM)  
For more on thawing Arctic soils:  
[go.nature.com/nwwsak](http://go.nature.com/nwwsak)

to retrace the path of Vitus Bering in his 1728 voyage through the Bering Strait into the Arctic Ocean. Comer invited naturalist Philip Conkling and me to join him on that voyage, which began, as did Bering's, in Kamchatka, the massive volcanic peninsula that drops south like a giant pendulum from easternmost Russia. We saw much of the same terrain that Bering did, and visited the island, now called Bering Island, where he perished after his ship was wrecked there on his second voyage.

Although we failed to pass through the Bering Strait in 1997, the Arctic Ocean did not elude Comer for long. In 2001 he again headed north with *Turmoil*, this time along



**The Fate of Greenland: Lessons from Abrupt Climate Change**

PHILIP W. CONKLING, RICHARD ALLEY, WALLACE BROECKER & GEORGE DENTON, WITH PHOTOGRAPHS BY GARY COMER  
MIT Press: 2011.  
224 pp.  
£22.95/\$29.95

the east coast of North America, to enter the Northwest Passage at its eastern portal in Baffin Bay. Sixteen days later, *Turmoil* emerged into the Beaufort Sea, north of Alaska, the first private vessel in modern times to traverse the Northwest Passage unassisted by an icebreaker. Roughly a century earlier, it had taken Roald Amundsen three years to make that voyage.

In an interview in the *Chicago Tribune Magazine* shortly after this historic 2001 traverse, Comer said: "All along the way we were astonished by how easy and quick our voyage was compared to who had gone before us. We began to realize that the Arctic...is the first part of the world where wildlife and humankind are experiencing changes brought on by global warming, and these changes will be difficult, if not impossible, to cope with."

Through this, Comer became very interested in climate science. Disappointed with the pace of research funded through normal channels, he wanted to accelerate climate studies. He sought out creative scientists and provided both funds and logistical support via his ship and its on-board reconnaissance float-plane. Over the next four years he took

G. COMER

climatologists Richard Alley, Wally Broecker, and George Denton to Greenland and the Arctic, along with Conkling, the chronicler of earlier Comer expeditions.

Cancer overtook Comer in 2006, ending a remarkable life that had embraced the beauty of the natural world and fostered a great passion for protecting and preserving it. *The Fate of Greenland* records his voyages of scientific exploration in the Arctic, through the words of Alley, Broecker, Denton and Conkling and Comer's own remarkable photographs.

The importance of Greenland in the global climate system, now and in the past, cannot be overstated. It influences polar meteorology, hosts seasonal sea ice on its periphery, and through ice discharge affects the thermohaline circulation of the adjacent Atlantic Ocean and the hydrological cycle around the world. The Greenland ice sheet, 3 kilometres thick in places and second only to the accumulation on Antarctica, has been an archive of climate change in the Arctic for more than 100,000 years. Much of what we know about events such as the Younger Dryas, the mid-Holocene Optimum, the Medieval Warm Period and the Little Ice Age derives from Greenland. And today, it is undergoing rapid changes.

For those actively engaged in climate science, there will be little new in this book. But its charm and value lies in the informal narratives these scientists provide into the ways that scientific enquiry proceeds: the posing of important questions, the formulation of many hypotheses, the quick rejection of most, and the structuring and execution of tests to evaluate the remaining few. Alley's work on the history of Arctic climate reconstructed from the deep ice cores, Broecker's discussion of the decades-long evolution of his thinking about thermohaline circulation, and Denton's descriptions of his on-the-ground experience in glaciated landscapes are stitched together by Conkling in an almost seamless narrative that preserves their individual voices.

The final chapters ask what lessons Greenland has taught us. The documentation of abrupt climate change gleaned from its ice offers a sober warning of the consequences of a rapidly warming Arctic, including the summertime loss of Arctic sea ice, the accelerating thawing of the permafrost surrounding the Arctic Ocean, and other issues such as methane release and global sea-level rise. The authors recognize that some mitigation of climate change remains possible, if the political will exists, but note that adaptation to the effects of climate change has already become a necessity — one that looms larger with every policy delay. ■

**Henry Pollack** is a professor of geophysics at the University of Michigan, Ann Arbor 48109-1005, USA, and author of *A World Without Ice* (Avery/Penguin, 2009). e-mail: hpollack@umich.edu



G. H. H. HUEY/CORBIS

Eradicating some species to protect others, such as California's island fox, can stir controversy.

## FICTION

## Reconstituted Edens

T. C. Boyle's latest novel probes the convoluted impacts of species eradication programmes, finds **Emma Marris**.

Islands are like novels. They are self-contained worlds, populated by a manageable cast of characters. And most have narratives that hinge on a series of incidents, accidents, coincidences, births and deaths.

Species arrive by flying, rafting, swimming — and by luck or by accident. The order in which they show up determines much. Early colonists can claim ecological niches and put down roots. But in limited spaces, existence is tenuous. One bad year, and every member of a species may die. Thus, on small islands, as in novels, the death of a single individual can change the trajectory of the whole.

T. C. Boyle's new novel, *When the Killing's Done*, centres on an archipelago off the coast of California called the Channel Islands. The plot mirrors real campaigns there to remove introduced animals in a bid to protect native species.

In 2001, rats were poisoned on Anacapa Island by the National Park Service to

prevent the rodents from eating native birds' eggs. Pigs were eradicated from Santa Cruz Island a few years later to protect indigenous flora and deter golden eagles — lured to the island to gorge on pork — from enjoying a side dish of endangered island fox.

Not everyone was behind the push to restore the archipelago to its pre-human glory. In 2003, *The Washington Post* told of animal-rights activist Rob Puddicombe scattering "vitamin-fortified kibble" around Anacapa in a bid to help the rats there survive — vitamin K being a partial antidote to the rodenticide that was used. His act was in



**When the Killing's Done**

T. C. BOYLE  
 Viking: 2011. 369 pp.  
 \$26.95  
 Bloomsbury: 2011,  
 384pp. £18.99