

Antarctica: A Biography

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ANTARCTICA: A BIOGRAPHY. By David Day. New York: Oxford University Press, 2013. 624 pp. \$24.98 (hardcover). ISBN 978-0199861453.

In Antarctica: A Biography, Australian writer David Day presents a comprehensive political history of Antarctica from 1766 to 2012. That may sound dull and boring to scientists, but Day livens it up with anecdotes, accounts of squabbles, and insights that, together with the inherent fascination of the Antarctic, make for a highly enjoyable account.

Since this review appears in a scientific journal, it is appropriate to point out that there is no science in Day's book, although there are ample incidents of the use of scientists as a cover for land-claiming activities, the latter indeed being the central focus of the book. That is not a criticism—there is no place where a discussion of scientific research and findings would be relevant. In fact, the nearly total disconnect between Antarctic science and Antarctic politics (a disconnect that Day does not discuss) is one of the most striking aspects of Antarctic history.

Each of the 21 chapters in the book covers an interval of time that ranges from 2 to 52 years, depending on the level of Antarctic activity during that period. Thus the approach is straightforwardly chronological, although Day interrelates the chapters through the continuing thread of continent claiming. The question, "Who owns Antarctica?" and national efforts to answer it in a way favorable to themselves stands behind every exploratory venture to the continent.

Day starts right off with a passage that shows his engaging style. "Captain James Cook had the look of a disappointed man as he carried his charts and journals up the steps of the Admiralty building in London in August 1775. The son of a Yorkshire farm laborer, he had become one of the world's great explorers. Yet he had failed to fulfill the great quest of the eighteenth century," the discovery of the "Great South Land."

My scheme for reviewing this long book (614 pages, including 523 pages of text, 70 pages of endnotes, and a comprehensive, 21-page index) is to proceed chapter by chapter, giving for each a brief summary of some important contents and a direct quotation of Day's own writing to illustrate its liveliness.

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Chapter 1 (1770s): Captain James Cook circumnavigates the continent twice and proves there is no great land mass reaching to temperate latitudes.

Quotation: "... in contrast to the aridity of Australia, the Great South Land was supposed to have a temperate climate, a large population of civilized people, rich gold and silver mines, and new plants that would produce 'a fortune for their finders ..."

Chapter 2 (1780–1820): First sightings of the islands of the Antarctic Peninsula and of the continent itself include those by Gottlieb von Bellingshausen, Edward Bransfield, William Smith, and Nathaniel Palmer. Author Day cites evidence for and against various claims but, in this chapter at least, reaches no firm conclusion with respect to primacies.

Quotation: "This was [Edmund] Fanning at his fictional best, inventing an imaginary conversation to put Palmer forward as the acknowledged discoverer of the southern continent."

Chapter 3 (1821–1838): James Weddell penetrates southwards to the front of the ice shelf along the west side of the not-yet-named Weddell Sea. Highlights include decimation of the fur seals and fervent lobbying during 1821–1838 for an official American expedition to Antarctica.

Quotation: "Slaughtering without thought of the morrow, it would take only two summers for the thriving seal colonies to be exterminated."

Chapter 4 (1839–1843): Jules Sébastien Dumont D'Urville claims a sector of the continent by planting the French flag on a small off-shore islet; Charles Wilkes claims the first sighting of the Antarctic continent; James Clark Ross discovers the western entrance to the (now-called) "Ross Sea" and sails down its western side to the ice barrier, reaching "farthest south" at 78.5°S.

Quotation: "Ross described how the members of his expedition had 'gazed with feelings of indescribable delight upon a scene of grandeur and magnificence beyond anything they had ever before seen or could have conceived."

Chapter 5 (1843–1895): There is a half-century-long lull in major territorial-claiming expeditions to Antarctica as polar exploratory interest shifts to the Arctic. Honors are heaped on d'Urville by France but Wilkes is officially ignored in the United States.

Quotation: "On the crucial charge of lying about the discovery of Antarctic territory, the overbearing lieutenant found that none of his officers were willing to bear witness to him having seen land from the Vincennes on 19 January ..."

Chapter 6 (1895–1906): Interest in Antarctica is renewed in several countries, including Belgium (Adrien de Gerlache), England (Robert F. Scott, Ernest Shackleton, Carsten Borchgrevink), Scotland (William Bruce), Germany (Erich von Drygalski), and France (Jean-Baptiste Charcot). It is boosted by the Royal Geographical Society, leading to several wintering-over expedition parties, some intentional, others accidental.

Quotation: "Among other activities, the officers and scientists debated whether Antarctica was a continent. They resolved the question by six to five in favour."

Chapter 7 (1907–1912): Introduction of the factory ship into the Antarctic activities makes for much greater efficiency in killing whales. The consequently increasing financial value of the region leads to invigoration of territorial disputes between Great Britain, Chile, and Argentina. Scott and Shackleton organize separate expeditions, dispute rights to McMurdo Sound bases, and reach

an agreement, which Shackleton violates, causing a permanent rift between them. Shackleton's march to the South Pole falls short. Roald Amundsen and Scott engage in a race to the pole, won by Amundsen. Scott and his party perish on return trek.

Quotation: "... getting closer than any other party to either the South or North Pole was a monumental achievement, made more so by his [Shackleton's] serious misjudgments, which had to be surmounted by steely determination and a willingness to take huge risks.

Chapter 8 (1912–1918): Mawson's first expedition explores most of the Antarctic coastline south of Australia, claiming it for the British Empire.

Quotation: "Amundsen thought that winning the race to the pole would bring glory to the young nation of Norway, produce much-needed finance for his planned drift across the Arctic, and convince his Norwegian lover to leave her husband for him."

Chapter 9 (1919–1926): With other countries distracted by the aftermath of World War I, British politician Leo Amery urges Britain to commit to attaining control of the whole Antarctic continent. Many questions about the meaning and practice of valid territorial claims exist, making claiming actions problematic. Shackleton prepares for next voyage to Antarctica despite lacking funds. Another British expedition, organized by John Lachlan Cope, is a dismal failure. The United States rejects all claims that do not include colonization and turns its attention to the Arctic. Disputes over controlling Antarctic territory continue.

Quotation: "Cope was an explorer of even more dubious reputation than Shackleton, and his plans were even more ambitious. He had signed on as a surgeon and biologist with the Ross Sea party of Shackleton's ill-fated expedition in 1914, during which he 'suffered from constant boils' and displayed 'childish outbursts of temper.' By the end, he was complaining of 'shitting nanny-goats turds' and was regarded by his companions as 'quite irrational.'"

Chapter 10 (1926–1928): The dispute between Britain and Norway over whaling rights in the Ross Sea continues and spreads widely when Norway announces a plan to examine "approximately half the known, and unknown, coastline of the Antarctic continent" and also establishes an outpost on British-claimed Bouvet Island, rejecting an old British claim. The United States had shown little interest in Antarctica since the Wilkes expedition in 1840. That all changes in the late 1920s with the advent of more reliable aircraft and the entry onto the scene of eager young pilot Richard Byrd.

Quotation: "The Antarctic now beckoned him with the glittering promise of glory and riches, particularly if he could claim to be the first aviator to fly over both the North and South Poles ..."

Chapter 11 (1929–1930): After arriving at the Bay of Whales site chosen for the construction of Little America, which lies on the Ross Ice Shelf front within the Ross Dependency, Byrd starts reconnaissance flights to the east into unexplored territory beyond the boundary of the dependency, discovering the Rockefeller Mountains. He names the surrounding region Marie Byrd Land, after his wife.

Byrd's activities worry Britain and Australia about the security of their claim of the Australian Quadrant. They decide to send Mawson on a new expedition to strengthen their claim. At the same time Norway is planning an expedition with the aim of claiming Enderby Land in the Australian quadrant.

Quotation: "After ninety years of American disinterest in the Antarctic, he [Byrd] had placed Antarctica firmly on the national agenda of the United States."

Chapter 12 (1931–1933): Norway and Australia continue their territory-claiming activities, mostly in the African and Australian Quadrants, respectively, but some are overlapping. Byrd is prevented from returning to Little America by the Great-Depression–strapped United States economy. There is international disagreement about what activities are needed to make a valid claim: Is sighting from shipboard enough? Is actually stepping on the mainland necessary? What about a cairn and flag on a nearby offshore island? How much of a formal ceremony is required? With the advent of aircraft, is dropping a flag from a plane enough? What about just seeing a region from the air?

In February 1933, Britain added a huge swath of territory to its existing Antarctic holdings when the king issued an order in council that annexed the sector that lay between 45°E and 160°E, except Adélie Land.

Quotation: "The United States could no more gain legal title to the Antarctic by Byrd looking upon it from a great height than any person could gain legal title to the moon merely by having seen it from afar."

Chapter 13 (1934–1936): Admiral Byrd returns home to a hero's welcome. Sources of financial support for his next expedition to the Antarctic are hard to find, until a lecture tour takes him to Detroit where he has lunch with Edsel Ford, leaving "with his coffers apparently replenished." His advisers urge him to plan flights over Marie Byrd Land that reach the coast to provide tie points for his aerial photography.

Lincoln Ellsworth puts into action his plan to fly across the continent from the Weddell Sea to Little America as the centerpiece of his expedition, which is to be 'purely a voyage of discovery.'

Quotation: "[Hjalmar] Riiser-Larsen had suggested to Ellsworth that he take Eskimo men and women and their dogs, but that hardly accorded with Ellsworth's heroic and racialised vision of a 'romantic epic.'"

Chapter 14 (1937–1938): Faced with a growing likelihood of the occupation of Antarctica, claimant nations are examining the strengths of their respective claims and what might be done to bolster them. Norway sends Lars Christensen south with his wife and children, who become the first females ever to step on Antarctica. Australia sends a meteorologist on a British research cruise to show that it was effectively administering its newly annexed Antarctic Territory.

While other countries sent their explorers to plant their nations' flags on the ice, the United States had left it to well-heeled private adventurers, such as Ellsworth and Byrd. Increasingly during the 1930s, the American government had begun to give quiet support to their explorers' territorial acquisitions ..."

Lincoln Ellsworth lays plans for his next Antarctic adventure, a flight across the continent from Enderby Land to Little America. In the end, he was able to make only one major flight of 460 kilometers into interior, on which he flew over a broad plateau 'almost the size of Nebraska, which he claimed for the United States and named "American Highland."

Quotation: "Wilkins' relations with Ellsworth had become strained. An expedition with two ageing prima donnas, each eager for publicity, was always going to be a fraught exercise."

Chapter 15 (1939–1941): Claimant nations put Antarctic colonization on their national agendas. In line with President Franklin D. Roosevelt's wishes, Byrd agrees to lead a large expedition with two permanently occupied bases, one in the Pacific Quadrant and one in the South African Quadrant, named the United

States Antarctic Service Expedition (USAS). Already in March 1939, Nazi Germany sends an expedition, under the command of Alfred Ritscher, to fly mapping surveys over the Queen Maud Land and Enderby Land coasts. The pilots make territorial claims by dropping small swastika flags onto the surface of the ice sheet below. The Germans have no means of travel on the surface so they are unable to make any control points for the maps, which consequently are almost useless.

Quotation: "One critic called Byrd 'the greatest American showman, up to and including Barnum'" and labeled the budding expedition, 'a crisis in asininity beyond the wildest winged imagination."

Chapter 16 (1941–1945): For the Americans with USAS who wintered-over in 1940, there is still the summer of 1940–1941 for carrying out field work, which they do with an emphasis on creating ground control points for the mapping flights of the previous summer. Claiming rituals are performed on Mount Grace McKinley. Disagreements between Britain and the United States over claimed territory continue. Part of the dispute is a strong argument between two "angry old men," one American, the other English; the argument is over the primacy of the first sighting of the Antarctic continent.

Quotation: "The [USAS] expedition continues to have the distinction of being one of the most important expeditions in the history of Antarctica and one of the least known."

Chapter 17 (1945–1947): With the war finally over, the claimant nations worry about strengthening their claims, as it has become apparent that actual occupation of a territory will be of crucial importance in any kind of international effort to arbitrate between competing claims. The United States is ready with the Byrd-led Antarctic Developments Project, better known as Operation Highjump, which launched in 1946. There is no pretense that Operation Highjump is driven by science; instead, its avowed purpose is to train and test men and equipment in cold conditions. Britain and Argentina jockey for position within their region of overlapping claims; Chile joins the activity.

Australia decides to move slowly, taking the intermediate step of occupying and annexing unoccupied Heard and Macquarie Islands in the Indian Ocean. New Zealand, the other hand, realizing that it has not the resources to compete with the United States, opts for maximum cooperation with the Americans.

For a time in 1946, it seems there might be three U.S. expeditions operating in the Antarctic at the same time: Byrd's, one by Ellsworth, and one by Finn Ronne. Ellsworth's never comes together, but Ronne's, known as the Ronne Antarctic Research Expedition, does and is successfully completed.

Quotation: The occupation of the main bases was to take precedence over all other activities. "Sovereignty was everything."

Chapter 18 (1948–1951): Ronne returns from his expedition with a wealth of new geographic data, and the "most extensive geological collection that has been brought by any Antarctic expedition." He struggles to find a publisher for his expedition report, finally finding one only after the report had been rewritten by a science fiction writer with author's name a pseudonym. With the division between Ronne and Byrd worsening, Ronne proposes a new expedition (which would compete for financial support with Byrd's proposed next expedition).

Australia starts a more gradual process by establishing bases on uninhabited Macquarie and Heard Islands. The situation is made more complicated during this period by the addition of the Soviet Union to the claimants in the Peninsular region and by the return of Russian and Japanese whalers to Antarctic waters.

Quotation: "Ronne had even named a feature after a dog food company that had contributed food for his huskies."

Chapter 19 (1952–1956): There is more disputation on and around the Antarctic Peninsula as Britain is hard pressed by first Argentina and then Chile. With little hope of any progress, their emphasis turns to reaching agreement with the United States on place names within the Falkland Island Dependency. Meanwhile, Britain is considering a transcontinental traverse from the Weddell Sea to the Ross Sea that will become one of the special features of the International Geophysical Year (IGY).

The United States is also involved in IGY planning, with a strong case being made for location for stations being chosen for maximum value in claiming territory. There also is a struggle going on between Byrd and Ronne over whose plan will be the base for IGY activities (Byrd's plan eventually wins out).

Quotation: "Britain even made a study of all aspects of using the South Polar Regions as a Proving Ground for H-bombs."

Chapter 20 (1957–1960): Admiral Byrd dies. The United States and Australia play a game of one-upmanship with the Russians over precedence of landings in the Australian Antarctic Territory, while New Zealand wrestles with the implications of the first commercial airliner flight from Christchurch to McMurdo, in the Ross Dependency.

Mapping activities strengthen in several countries as a means of supporting national claims to Antarctic territory. The long dormant concept of an international treaty agreement of some sort comes to the fore with the appointment by the United States of Paul Daniels to negotiate such a treaty.

Quotation: "The sight of two female flight attendants stepping onto the ice where Scott and Shackleton had struggled for their lives was a truly modern moment."

Chapter 21 (1961–2012): The Antarctic Treaty of 1959 is supposed to end the rivalries for ownership of the continent, but instead the control of the continent becomes even more contested than before. Argentina, Australia, Britain, Chile, the Soviet Union, and the United States all take steps to maintain or solidify their claims.

Running commercial tourist ship excursions to Antarctica has been a growth industry since 1966, joined since 1987 by aircraft flights from Argentina directly to a landing field on the ice sheet. Tourists brought by ship to the Antarctic Peninsula (the "Antarctic Riviera") number in the thousands each summer, constituting a threat to sensitive on-going experiments and a threat of environmental pollution. The latter threat becomes a reality in 1989, when the Argentine ship *Bahia Paraiso* runs aground on a reef near Anvers Island, spilling some 600,000 liters of diesel oil into the ocean. Sensitized by this disaster, environmentalists from several treaty signatories band together to take a stand against a draft treaty protocol on mineral resource—related activities and succeed in changing it into a total ban on all such activity for 50 years.

Quotation: "For centuries, the Antarctic defied man's approach. Now its dangers and its terrors have been largely conquered. Only its future remains unknown."

The strength of this book is clearly its attention to the kinds of historical details often omitted in accounts of Antarctic exploration. The main weakness is its overly critical, off-hand portrayal of some

field Antarcticans, which can make them appear to be incompetent adventurers. This defect most likely stems from the author's lack of experience in a polar environment and his lack of knowledge about the difficulty of balancing survival and the practice of science in that environment. The worst example is his attribution to a blanket "incompetence" of one geologist's failure to provide a detailed science plan to authorities in Washington, at the same time that he was also responsible for repairing and maintaining the mammoth and troublesome "snow cruiser" in working order, which, at that place (Little America) and that time (1939), was of more immediate importance than the planning details the authorities were seeking.

Antarctica, a Biography is an enjoyable read that provides interesting insights into the intricacies of international diplomacy vis-à-vis territorial ambitions, and it might provide a perspective on similar developments now taking place in the Arctic. However, the authors' portrayal of Antarctic scientists

seems not to have been thoroughly researched and should be viewed with skepticism.

(Editors' note: The reviewer, Professor Charles R. Bentley, has been a leading Antarctic scientist for the past seven decades and was personally acquainted with many of the scientists mentioned in this book. He was one of three chief seismologists during the IGY and led multiple oversnow geophysical/glaciological traverses across West Antarctica between 1957 and 1961, producing fundamental discoveries that are still cited today. He continued Antarctic field work until 2010.)

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