

meteorologist, that there was an unexpected and rapid drop of temperature while the party was on the Barrier. This part of the text is illustrated with the weather record of the polar party for the months of February and March 1912 compiled from Bowers's log and the diaries of Scott and Wilson.

Wright's comments on his fellow participants in the expedition are astute and humorous. The only expedition member of whom he seems not to have approved was Edward "Teddy" Evans, but he was not alone in that.

The editors have included details relating to the procedures adopted by Wright for undertaking his scientific work and these are amongst the most interesting and valuable parts of the book. It is clear that very great stamina and endurance were required as evidenced by a quote from expedition photographer Herbert Ponting:

Wright . . . seemed to be impervious to the elements and used to kneel for hours beside his transit telescope, observing the occultation of stars. (p. 160)

Wright's record of the same duty was:

Pendulum swinging is quite a strenuous business, 2½ hours at a time, twice a day in a damn cold cave with one ear at a telephone, one eye at a telescope . . . and one bare hand writing down. Then comes 2 hours outside also with one telephone at one ear and one eye at one telescope. . . . and a temperature hovering around -40 [°F] with a wind at 25 m.p.h. occasionally. (p. 161)

Equally of interest is the section on Taylor's reconnaissance of the Western Mountains in which Wright participated as glaciologist and this part of the book is informed by detailed maps showing the route taken.

The presentation of the book is most attractive. It has been handsomely produced to a high level of quality rather than down to a price which is all too common nowadays. Virtually every page has well-executed sketches by Pat Wright that represent the fruits of very considerable research into the subject and lend immediacy to the text. The book includes a list of participants in the expedition, a particularly detailed index, and relevant maps.

The editors have placed all those interested in the history of antarctic exploration in their debt. They and Ohio State University Press are to be warmly congratulated for their work in producing this volume.

Ian R. Stone
The Registry
University of Kent at Canterbury
Canterbury, Kent
CT2 7NZ
England

THE CRYSTAL DESERT: SUMMERS IN ANTARCTICA.

By DAVID G. CAMPBELL. Boston and New York: Houghton Mifflin Company, 1992. 308 p., 2 maps, appendix, notes, references, index. Softbound. US\$10.95.

I once had a conversation about scientific writing with Joe MacInnis, M.D., the Canadian writer, marine scientist and arctic diver. He suggested that while many scientists write well for publication in scientific journals and a small audience of specialists, few had the ability to write well about their work for publication in popular science journals or books aimed at a broader audience of non-specialists. I often think of that comment when I write for scientific journals and I was reminded of it again as I read *The Crystal Desert: Summers in Antarctica*.

The author, David Campbell, is a marine biologist and currently Henry R. Luce Professor of Nations and the Global Environment at Grinnell College. The book was written after he spent three summers at the Brazilian research station, Comandante Ferraz, located on King George Island in the South Shetland Islands, 200 km north of the tip of the Antarctic Peninsula. In this, the "Banana Belt" of Antarctica, he studied the life cycles of parasites that live in seals, fish and crustaceans. In his words (p. 19), "This book is about living for a summer in that Antarctic outpost."

Normally I would be discouraged by such a description because I have grown tired of reading often dry, monotonous accounts of other people's daily activities, experiences and suffering in the polar regions. In this case, however, this brief description of the author's purpose appears at the end of the Prologue, which has already given the reader a pleasant hint of the style and scope of the book they are about to read. The book describes aspects of life and work at Comandante Ferraz, and delves into the history of human activity in the region, particularly as it relates to science and exploration, and the exploitation of marine resources, namely sealing and whaling. But above all, this book is a popular natural history of King George Island and the adjacent lands and waters of the Southern Ocean.

In Chapter 1, "Seabirds and the Wind," we cross Drake Passage from Southern Chile to King George Island aboard the *Barão de Teffé*, a Brazilian Navy supply vessel. This offers the opportunity to introduce some of the complexity of the regional meteorology and oceanography and their role in promoting the rich bird life of the area. The descriptions of petrels and albatrosses gliding, dipping and soaring as they followed the ship reminded me of my own experiences standing on the pitching and rolling stern of an icebreaker watching the apparently effortless flight of these long-distance wanderers.

Chapter 2, "Memories of Gondwana," begins with a hike to change the tape on an automatic weather station data recorder, and to replace some burned-out bulbs on the crucifix at the summit of a mountain. We might wonder at the latter, but many of the ice-free areas of King George Island, and elsewhere in Antarctica, are littered with the remains of human folly and foible and disregard for the fragile environment. However, it is not the purpose of this chapter to discuss environmental damage. Rather, we learn about natural environmental change, the discovery of petrified tree trunks and fossil leaves and flowers, even the jawbone of an opossum, and their implications with

respect to plate tectonics, ancient climate and animal migration.

At the beginning of Chapter 3, “Life in a Footprint,” a visiting tourist tramples a moss bed and leaves an indelible footprint. Subsequently, we learn more about lichens, mosses and grasses, and the only two flowering plants in Antarctica, the Antarctic pink and the Antarctic bundle grass, which maintain a precarious existence where snow covers the ground for nine months of the year. Even insects such as mites, springtails and midges appear during the short summer, after surviving the winter by different strategies, including the use of biological anti-freezes and emptying their guts of any debris that might act as nuclei for ice crystal growth. On the other side of the continent, in the Dry Valleys of Victoria Land, dense and luxuriant mats of bacteria, algae and mosses exist only on the bottom of the perennially ice-covered lakes, and terrestrial bacteria, lichens and algae have an endolithic existence, meaning they survive only below the surface of rocks.

Chapter 4, “Penguins and Hormones,” speaks for itself. The author uses his visits to penguin rookeries as a device to describe the life cycle and behaviour of the Chinstrap, Adélie and Gentoo penguins. We obtain some sense of the clamor and stink of the rookeries on King George Island and on nearby volcanic Deception Island, home to penguins numbering in the tens and hundreds of thousands. I have seen many penguins up close as I have worked on ice floes, but I have never been in or stood downwind of a penguin rookery. Frankly, it is not high on my polar wish list, but whenever I see or read about penguins I never cease to be amazed at the toughness of these fascinating and amusing creatures.

Penguin survival depends in large part on consuming vast quantities of krill, the subject of Chapter 5, “The Galaxies and the Plankton.” One wonders how many penguins would be required to consume the three to four tons of krill ingested each day by an adult blue whale? As some whale populations of the Southern Ocean have been hunted to near extinction this century, a subject for further discussion in Chapter 11, an illusory krill “surplus” has been created. Some of the nations that slaughtered the whales and made possible the krill “surplus” now eye the krill itself as a food source. But they may be deluding themselves because expanding penguin and seal populations might have beaten them to it.

For me, Chapter 6, “The Bottom of the Bottom of the World,” is one of the most fascinating of this book. As the author dons a clammy dry suit, waddles to the beach, and enters the bay, where cold water insidiously leaks through the seams at his wrists, ankles and neck, you can feel the discomfort and almost believe you are there with him. The sensation continues as he explores the shallow waters of the bay, describing the limpets clinging to rocks, out of harm’s way of scraping ice; the brittle stars and urchins preying on clams, found in colonies numbering 75,000 individuals per square metre elsewhere; an eight-legged sea spider, and its prey—sponges comprising colonies of cells, which, after being mashed through a coarse cloth, will reassemble into an entirely new organism. After thirty minutes it is getting cold and the author returns to shore to warm up in preparation for a return to the bay in the afternoon to set a gill net for fish and a trap for invertebrates. They house the parasites that are the

subject of his study and of Chapter 7, “The Worm, the Fish and the Seal.” One particular parasite lies dormant in fish waiting for its host to be eaten by a seal. Then the parasite really goes to work, reproducing and multiplying in the gut where the seal is robbed of its food. Determined to learn more about this parasite and its role in mortality, the author goes hunting for the fresh excreta of the Weddell seal, which leads to a description of the life and behaviour of that seal and its relatives the crabeater, fur and elephant seals, and that formidable killer, the leopard seal.

It took some time for Antarctica to be discovered, but once it was, there was an indecent rush to exploit its rich marine resources. English merchant William Smith is credited with the discovery of Antarctica, in this case the South Shetland Islands, where he planted the Union Jack in October 1819 and claimed the land for his “distant and unknowing sovereign” King George. Smith subsequently returned to the South Shetlands along with many other sealing vessels to kill the abundant fur seals for their pelts. Not content with that slaughter, rival English and American crews fought for possession of individual beaches and their seals. But these were mere distractions in an effort that reduced the Antarctic fur seal population of the South Shetlands to near extinction by 1825. All this and more, including the unparalleled navigation of Captain James Cook and Admiral Thaddeus von Bellingshausen, we learn in Chapters 9 and 10, “Visions of Ice and Sky” and “The Indifferent Eye of God.”

Just as the seal populations were reduced in the early nineteenth century, so have the great whale populations of the Southern Ocean been reduced this century. We read about the “Passing of the Leviathans” in Chapter 11, but first we learn something about the whales themselves in Chapter 12, “The Tern and the Whale”—their migrations and singing, their feeding habits and food sources, and their anatomy, including the remarkable reproductive organs of a large blue bull whale. Having engaged our sympathy for the whale, the author then jolts us with descriptions of whale hunting, which grew ever more sophisticated and became more industrialized until the post-Second World War period when well-armed armadas were quickly cleaning up. As the author (p. 231) puts it, “The whales didn’t stand a chance,” and these two chapters act as an eloquent but undogmatic appeal for future common sense. It is to be hoped that the recently established southern ocean whale sanctuary is respected and no further whaling for “research purposes” takes place.

Finally, in “The Tempest,” Chapter 13, the author’s summer is over and he must leave Antarctica before the weather deteriorates. So it’s back on the *Barão de Teffé* for a short voyage to Teniente Marsh, a Chilean air force base with a runway that accommodates C-130 aircraft. On this day it is bringing a delegation of Brazilian generals, admirals, politicians and reporters who are whisked off by helicopter to Comandante Ferraz for two hours before they return north with their souvenirs, in the company of David Campbell and a few tons of thawing, dripping, Chilean garbage, the price the Brazilians must pay for using the Chilean airstrip.

The front cover of the book informs the reader that the author won the Houghton Mifflin Literary Fellowship Award for writing *The Crystal Desert: Summers in Antarctica*. The front cover also carries a quotation from Edna O’Brien, the well-

known Irish authoress, who describes the book as “A work of flawless prose, in which the plants, rocks and glaciers of Antarctica are treated with the same peculiarity as the characters in a novel. A feast.” I don’t know the criteria for selection for the aforementioned award, and I haven’t the literary skills of Edna O’Brien, but I can say that David Campbell undoubtedly falls into Joe MacInnis’s second category of scientists who write well for a broad audience of non-specialists.

It must be apparent by now that I thoroughly enjoyed reading this book. Its eclectic mix of subjects are cleverly woven together into a fascinating story. It is well written, well organized and full of interesting information. At the end of the book there is an appendix of plant and animal names, notes providing more details on particular items in the text and, for those who might want to discover even more, a bibliography. If the book should prove so popular as to go into a second edition, I would recommend more maps and illustrations, and the index needs some careful revision as you won’t always find what you want on the page indicated by the index. But these are minor complaints about a book that is very good value for the money.

I recommend *The Crystal Desert: Summers in Antarctica* without reservation to specialist and non-specialist alike, from high school to university. There is much here for physical, biological, and earth scientists, for those in the arts and social sciences, for the layman and policy-makers, and, of course, generals, admirals, politicians and reporters. Like me, you will learn much about the human and natural history of Antarctica and, if you have been fortunate enough to have traveled there, you will be reminded, as I was, of how privileged we are to have been able to visit and work in Antarctica.

Martin O. Jeffries
Geophysical Institute
University of Alaska Fairbanks
903 Koyukuk Drive
P.O. Box 757320
Fairbanks, Alaska, U.S.A.
99775-7320

THE MYTH OF THE EXPLORER: THE PRESS, SENSATIONALISM, AND GEOGRAPHICAL DISCOVERY. By BEAU RIFFENBURGH. London and New York: Belhaven Press, 1993. Distributed in North America by St. Martin’s Press, New York. 226 p., illus., maps, index. Hardbound. US\$59.00.

Anyone who has ever thought about why Europeans continued to search for a Northwest Passage centuries after a viable commercial route to the Orient had been shown to be impossible would be interested in this book. So would anyone who has ever taken a moment to reflect on why it mattered if Frederick Cook beat Robert Peary to the North Pole, or if Peary’s visit was the first, or if either man ever attained the Pole. Appealing to readers of imagination, culture, and curiosity, Beau Riffenburgh’s new book is not an analysis of Arctic or African space nor of the peoples who live there. Rather, *The Myth of the Explorer*

examines the role of the nineteenth and early twentieth century newspaper in shaping how we think about those geographical spaces and the men who explored them.

The book’s thesis is that the new stamp of sensational journalism, the development of which Riffenburgh attributes to James Gordon Bennett Jr., editor of the New York *Herald*, shaped much of the imagery of Arctic and African exploration that is still in fashion today. Supplanting the Burkean landscape descriptors of the sublime and picturesque, the sensational journalistic techniques focused on the exhilaration of apprehending the unknown, on man’s role as a conqueror of nature, and on the explorer as a heroic conception of nation.

In a characteristically postmodern approach to heroes, Riffenburgh’s attention is on the social mechanisms that construct the notion of a hero, and not on the historical or biographical subject itself. Accordingly, while the author is well-informed about Robert E. Peary and Frederick A. Cook, his real interest lies in how these men were presented in the popular press and what that reveals about the manipulative powers of journalism. Thus, while the newspaper visionaries created heroic and profitable images of African and Arctic explorers for popular audiences, they exerted a controlling force on the shape that exploration was to take. In fact, within Riffenburgh’s sphere of reference, names such as Charles A. Dana, Joseph Pulitzer, and James Gordon Bennett Jr., hold as much sway as names such as Stanley, Nansen, Franklin, and Burton.

Riffenburgh’s intention is not to debunk those heroes from a past age, but to understand how we value them. In the same way that historians will recognize the incredible importance of John Barrow to nineteenth century British exploration of the Arctic, even though the Second Secretary to the Admiralty made only one brief visit to Greenland, *The Myth of the Explorer* enables us to grasp the extent to which commercial motivations in journalism not only gave direction to the course of geographical exploration between 1855 and 1910, but created a popular conception of heroism that virtually excluded the Danas, Pulitzers, and Bennetts from anything but vicarious participation. The newspaperman’s role was that of the dramatist, remaining backstage while he created roles to be played by more colourful explorers. And where the explorer’s colour was too subdued, the sensational presses either added their own highlights or turned their attention elsewhere. But because attention from the popular press was essential to procuring financial backing for outfitting an expedition, the newspapers actually played a role in the destiny of much exploration in Africa and the Arctic.

Like all good histories, Riffenburgh’s book does not simply present a collection of facts and dates, but gives readers a new way of approaching those facts and dates we already possess. He does, however, add a wealth of information about the history of journalism, gracefully and convincingly interweaving his knowledge of journalism into what we have known for some time about geographical exploration. Through this process, we are led to a full appreciation of how we think about the Arctic and Africa, and how we think about the men who explored them.

Both a trained polar historian and an experienced journalist himself, Riffenburgh writes this book with a solid knowledge of his material and a persuasive pen. As a stylist, Riffenburgh writes