

SKAFTAFELL IN ICELAND: A THOUSAND YEARS OF CHANGE. By JACK D. IVES. Reykjavík: Ormstunga Bókaútgáfa, 2007. ISBN 978-9979-63-055-5. 256 p., colour maps, colour and b&w illus., forewords, notes, appendices, references, suggestions for further reading, index. Hardbound. ISK5.200; Cdn\$80.00.

This beautiful book is the result of field research and study over a 55-year period in Örafi (the Skaftafell–Skeiðarárjökull–Öræfajökull district), southeastern Iceland, by Jack Ives, now an honorary research professor at Carleton University, Ottawa. The layout of the book (26 × 21 cm) is somewhat unusual. Following the table of contents there are three forewords: the first is by Vigdís Finnbogadóttir, president of Iceland from 1980 to 1996; the second is by Alp Mehmet, British ambassador to Iceland; and the third is by Helgi Björnsson, a glaciologist of world repute at the Science Institute, University of Iceland. These forewords lead to a preface, acknowledgments, a short but essential “Note(s) on Pronunciation and Icelandic Usage,” a sampling of landscape photographs, and portraits of Anna María Ragnarsdóttir, to whom the book is dedicated, and Ragnar Þ. Stefánsson, proprietor of the farm at Skaftafell when the author arrived in 1952.

The book is divided into three chapters: Part One (p. 31–80) “History: AD 874–2007”; Part Two (p. 81–148) “Skaftafell and the Nottingham Students, 1952–1954”; and Part Three (p. 149–186) “Conservation of Natural and Cultural Heritage.” The main text is followed by 11 appendices, plus references, suggestions for further reading, and an index. The text is accompanied throughout by high-quality colour illustrations, plus a few black and white images. Many of the excellent photographs are by the author; others have been contributed by expedition members. The striking aerial photograph that serves as a frontispiece, showing the vast sweep of landscape from Lómagnúpur to Skeiðarárjökull (*jökull* = glacier) to Örafi during the great flood (*hlaup*) of 1996, is by Oddur Sigurðsson. Several of the outstanding full-page or double-page photographs are by Snævarr Guðmundsson, who was also responsible for layout. Matthew Roberts arranged the numerous excellent maps. The two largest maps, used as front and back end papers, illustrate the southeastern Icelandic landscape in 1952 and 2007, respectively.

Part One, “History AD 874–2007,” provides an account of the Norse settlement and development of the Örafi district, part of the county of Austur-Skaftafellssýsla, which takes its name from the ancient sheep farm of Skaftafell, central to this story. The history of Örafi is divided into four sections: 1. The Saga Period AD 874–1350; 2. Beginnings of glacier advance and volcanic activity AD 1350–1500; 3. The Little Ice Age AD 1500–1900; and 4. The Modern Period 1900–2007. Each section, described through the eyes of Icelanders of the time, is accompanied by a map illustrating the estimated landscape conditions, i.e., the area covered by cultivated land, heathland and mountains, outwash plains and ice, as well

as the locations of glacial rivers, notable peaks, farms and churches. The maps (Figs. 4, 7, 9, and 16) show the approximate situation in AD 1010, 1402, 1786, and 1952, respectively. The most striking change through time is the decrease in area of cultivated land, a consequence of the progressive eastward encroachment of Skeiðará, the main river debouching from Skeiðarárjökull, and also because of the *jökulhlaups* (glacial outburst floods) resulting from the eruptions of Öræfajökull in 1362 (Fig. 8) and 1727. A comparison between the maps shows that several of the original farms and churches are now submerged beneath the *sandur* (outwash plain).

Part Two, “Skaftafell and the Nottingham Students, 1952–1954,” deals with the three expeditions to Skaftafell organized by Jack Ives in 1952, 1953, and 1954. These expeditions, based in the birch forest in the valley below Morsárjökull, were primarily composed of undergraduates from the University of Nottingham (but with a few faculty members along in 1953 and 1954). On balance, the expeditions were very successful, despite the deaths of two members of the 10-person group in August 1953. This tragedy brought the author even closer to Ragnar Stefánsson of Skaftafell, without whose help, hospitality, interest, and guidance the expeditions would not have been possible.

The stimulus to journey to Skaftafell was provided by the writings of the eminent Swedish glaciologist and geographer, Hans W:son Ahlmann, who organized a series of Swedish-Icelandic expeditions to Vatnajökull in 1936, 1937, and 1938, at which time Skaftafell was visited. The famous Icelandic natural scientist, Sigurður Þórarinnsson, was on these expeditions as a student, and he figures prominently in the present book, not least as a leading proponent for the creation of Skaftafell National Park.

Numerous results from the Nottingham expeditions have been published in the scientific literature, as listed on pages 248–249, but a new glaciological map of Morsárjökull in colour is presented here as Fig. 50. Other interesting scientific results appear in Appendices II—*Jökulhlaup* (details of the *jökulhlaup* from Skeiðarárjökull in 1954 as well as a listing of such occurrences from 1816 to 2004), III—The Glaciers of Örafi (plane-table surveys of the snout of Morsárjökull in 1953 (Fig. 82) and of Skaftafellsjökull/Svínafellsjökull in 1954 (Fig. 83), and IV—Mountaineering in Örafi (comprising a chronology of glacier exploration and climbing in Örafi). It is worth noting, in passing, that the first geodetic survey of the Öræfajökull glaciers was performed by a Dane, J.P. Koch, in 1902–04. An unexpected benefit of this book having been written roughly a half-century after the expeditions is that in July 2006, two scientists found camp remnants such as tent poles, skis, a sledge, and crampons—150 items in all—that had melted out of the middle section of Skaftafellsjökull. These artifacts were determined to have belonged to Ian Harrison and Tony Prosser, the lost members of the 1953 expedition (see Figs. 90 and 91, Appendix XI). Not only did this find provide closure, but because Ian and Tony’s proposed route from the “Ice Camp” on

Vatnajökull was known, it was possible to measure the approximate distance to the artifact site and calculate the velocity of the glacier.

Part Three, “Conservation of Natural and Cultural Heritage,” provides details of the complex issues of conflicting land claims, planning and maneuvering that led first to the creation of Skaftafell National Park from what had been sheep farms, and then later to the proposal for the much larger Vatnajökull National Park. The map in Fig. 68 shows the area encompassed by Skaftafell National Park in 1967 and in 1984. Fig. 74 delimits the areas proposed in 1998 to be national parks around each of the four main ice caps in Iceland—Vatnajökull, Hofsjökull, Langjökull, and Mýrdalsjökull—as well as protected areas and nature reserves. Fig. 75 shows the boundary of Skaftafell National Park in 2004, as well as the proposed Vatnajökull National Park (2007), which includes all of the ice cap plus a vast area to the west and northwest, in addition to separate areas around Mývatn and Dettifoss in the far north of Iceland. A considerable tourist industry has developed in southeastern Iceland because of the national park. There is a Skaftafell Visitor Centre, and the Hotel Skaftafell at Freysnes is operated by Ragnar Stefánsson’s daughter, Anna María. This chapter concludes with Ives’ recommendations on operating the park more efficiently.

Several of the appendices have been cited earlier, but this review would not be complete without mentioning Appendix I, which deals with seal hunting at the coast far away from Skaftafell. The end paper maps show the sections of the coast apportioned to each farm—Skaftafell, Freysnes, Svínafell, Hof, etc. The whole concept of “ownership” of part of the seashore, far from any farm, is not what the casual observer might expect, yet the seals formed a vital source of oil and income (from the sale of skins) for the farmers.

There is little to criticize in this book. A number of place names used in the text do not appear on any map. Also, a list of illustrations in the Table of Contents would have been helpful. A detailed map, or a low-level aerial photograph, with scale, of the sheep farms at Sel, Bölti, and Hæðir (Ragnar’s farm) would have aided the reader (cf. Fig. 73, an aerial photograph showing the location of Hotel Skaftafell amongst the end moraines of Svínafellsjökull). To cite a few minor points, the elevation of Hvannadalshnúkur, Iceland’s highest mountain, is given as 2110 m on pages 18, 34, 128, and 205, but 2111 m on p. 244 and 2119 m in Fig. 1, p. 32—perhaps these differences simply reflect changing snow/ice thicknesses? Bolton, p. 205 and 248, should be Boulton (G.S.); Nielson, p. 70, should be Nielsen; and, on p. 182, Professor Hans W:son Ahlmann’s expeditions to Svalbard (2), Iceland, and Northeast Greenland were all initiated in the 1930s, not the 1920s.

Few Arctic books that I’ve encountered combine fascinating history, stunning illustrations, and a personal story to the degree that this volume does. It is well worth its price, and it should be noted (p. 21) “that all proceeds from sales of this book are to be used to establish a research fund

for administration by the Friends of Skaftafell.” The book is printed and bound by WS Bookwell, Finland, on MultiArt Silk paper. I recommend this book to anyone interested in the North, to anyone planning to visit Iceland, and to anyone interested in Icelandic history or the unique Icelandic landscape. Be sure to read the three forewords. I myself had a wonderful tour of Iceland in 1960, under Sigurður Þórarinnsson’s expert guidance, but it is clearly time to return, perhaps this time to Skaftafell!

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CANADA ROCKS: THE GEOLOGIC JOURNEY. By NICK EYLES and ANDREW MIALL. Markham, Ontario: Fitzhenry & Whiteside, 2007. ISBN 978-1-55041-860-6. xvi + 512 p., colour maps, photos, and charts, glossary, bib., index. Softbound. Cdn\$60.00.

Telling the story of the four-billion-year history of Canada is a daunting task, especially when it has to be boiled down into a single book for the reading public. Fortunately, two professors from the Earth Sciences department at the University of Toronto have given it a try. Nick Eyles and Andrew Miall are superbly qualified to write a book like this—they have extensive experience in many areas of Canada, and in rocks of many ages. They crossed the country visiting and photographing key geological sites. And then they distilled their knowledge into a readable 500 pages, or, if you prefer, eight million years a page.

The book is organized in a conventional manner. It starts at the beginning, neatly summarizing what little is known about the earliest Earth. Then the authors move on to the key concept in geology: plate tectonics. Geology cannot be fully understood except in the context of plate movements, just as biology cannot be fully understood without evolution, or chemistry without the periodic table. The chapter on plate tectonics covers the now classic approach—rifting, drifting, subduction, and collision—but the authors also cover some ground that will be new to nonspecialists, including Large Igneous Provinces, or LIPS (times in earth history characterized by massive outpourings of lava), and dynamic topography (the idea that convection deep in the centre of the earth can warp the continents).

The chapters then move forward through time, covering the plate history and amalgamation of North America, the formation of the Canadian Shield, and the intermittent covering of the Canadian Shield by oceans during the last 500 million years. The mountainous areas of the Rockies, Appalachians, and the North each get a chapter covering their development. This book is notable for its treatment of the Arctic. Andrew Miall has a productive research career