INTO THE ICE SEA: BARENTS' WINTERING ON NOVAYA ZEMLYA – A RENAISSANCE VOYAGE OF DISCOVERY. By JAAPJAN ZEEBERG, with contributions by PIETER FLOORE. Amsterdam: Rozenberg Publishers, Dutch University Press, 2005. ISBN 90-5170-926-9. 317 p., b&w illus., bib., appendices, index. Softbound. Euros 29,50.

Into the Ice Sea is an account, written for a general public, of some Russian-Dutch archaeological expeditions to Novaya Zemlya and Vaygach Island in northern Russia during the 1990s to revisit the site where Willem Barentsz wintered in 1596–97.

After an informative introduction, the book starts with the visit of the Russian adventurer Dmitri Kravchenko to Amsterdam in March 1991. An interesting description follows of how Kravchenko was received by the people of the Rijksmuseum Amsterdam and how he met the two students of the Maritime Academy in Enkhuizen who would join him on his attempt to sail the northern sea route again in the summer of 1991. What's missing is Kravchenko's visit to the Arctic Centre of the University of Groningen, which initiated the first Russian-Dutch archaeological survey of the remains of the Saved House (mentioned in the book only in passing), which took place in the summer of 1992.

Chapters 2 to 5 give much information about the Netherlands and Dutch exploration in the 16th century, with which the author creates a historical framework for Barentsz' voyage. This is probably the most difficult part of the book: readers not so familiar with Dutch history could easily get lost in the enormous amount of facts and names. Besides, all this detailed information about Dutch history is not needed to understand the story. The same applies to the history of the ship *de Liefde*, which in my opinion is not needed to grasp the subject of this book. The references and quotations from the logbook of Gerrit de Veer are strong enough to give this book a historical framework.

The story of the Amsterdam group's first expedition to Ice Harbor in 1993 follows in chapters 6 and 7, told in fragments from one participant's diary. These fragments are the most fascinating parts of the book. They give, sometimes in the text and sometimes between the lines, a good insight into the challenges and problems of helicopter expeditions into the Russian Arctic. They describe the misunderstandings and disagreements between the Russian and Dutch members of the team, the problems they had with the equipment, and the unexpected encounters with the crewmembers of the nearby Russian polar station. They also tell of the surprises and disappointments of the archaeological field work. These diary fragments also have been extended with historical information to fit the historical framework. Although this information sometimes enriches the text, it makes it less original.

Chapter 8, entitled "Two years later," tells how the 1995 expedition to northern Novaya Zemlya was organized.

The author uses diary format to describe the preparation of this second expedition. It is interesting to notice the differences between the preparations of the 1995 and 1993 expeditions. This time the Amsterdam group's Russian partner is Pyotr Boyarsky of the Heritage Institute in Moscow. His cooperation enabled the group to go by ship, which gave them the opportunity not only to complete the archaeological excavation of the Saved House and look for parts of the ship, but also to search for the grave of Willem Barentsz. For this last part of the project, a pathologist was invited to take part in the expedition to investigate the remains of Willem Barentsz and Claes Andriesz Goutijck should they be found.

The expedition started in Archangelsk, where the team boarded the research vessel R/V *Ivan Kiriev*. Chapter 9 begins with the voyage aboard *Kiriev* to northern Novaya Zemlya. In a very short time, Otto Sverdrup, Otto Schmidt, Benjamin Leigh Smith, Ernest Shackleton, Fridjof Nansen, Eduard von Toll, Hugh Willoughby, and many others pass by to give this part of the book what I consider an unnecessary historical context.

When the R/V Kiriev finally arrived in Ice Harbor (chapter 10), a landing was not possible because of fog and swell on the beach. The captain decided to sail on northward to Ivanov Bay first, to put ashore the group that would search for the grave of Willem Barentsz, and then return to Ice Harbor to land the excavation group. The first group landed successfully in Ivanov Bay, where they began by building a cabin. Then they started to survey the coasts for the grave of Willem Barentsz and his companion. The diary of one of the participants (chapters 11 and 12) tells about the search for the grave at three possible locations. This is another fascinating part of the book. It includes everything that makes the Arctic exciting, but it also tells about the dangers of the region. It turned out that this part of the project was more survival than scientific research. After some days of unsuccessful searching for the grave, the team had to wait several days before the ship could pick them up.

The book continues (chapters 13-14) with the excavations of the remains of the Saved House in Ice Harbor. This time, the surroundings of the house were investigated. The investigation produced some small finds and some new information about the construction of the house. The archaeological data are compared with the information Gerrit de Veer provides in his logbook about the building of the house.

Toward the end of their sojourn in Ice Harbor, Zeeberg's group used a metal detector to search for parts of Willem Barentsz' ship. In this way they found some additional parts of the ship, which together with the parts salvaged by earlier expeditions, gave information about its size and construction (chapter 15).

On the way back to Archangelsk, the party undertook surveys at several places along the coasts of the Yugor Strait (chapter 16), but found no traces of the Dutch 16th century expeditions. Chapter 17 describes the return of the party in 1998, when they again searched in vain for graves in northern Novaya Zemlya. The book ends with the author's solitary recollections of that fieldwork while on another expedition, to Vaygach Island, in August 2000. Zeeberg and two companions had ranged the tundra of that island searching for geological evidence of the ice sheet that had covered the islands during the last Ice Age. Then the party separated, and he had to wait 10 days alone for the helicopter to return.

As said above, much historical information is packed into this book. This information is not always necessary, and it makes some parts difficult for a more general public to read. The chapters based on the diaries of JaapJan Zeeberg and Pieter Floore compensate for the difficult parts of the book. Some of them are fascinating and very original, and they show the unexpected things that can happen on expeditions into the Russian North.

In spite of my remarks about its historical parts, I recommend this book to anyone who is interested in accounts of expeditions into Arctic regions.

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WESLEY EARL DUNKLE. By CHARLES CALDWELL HAWLEY. Boulder: University Press of Colorado, 2003. ISBN 0-87081-723-X. 274 p., b&w illus., notes, glossary, index. Hardbound. US\$34.95.

This is a fascinating account of the exploits of one of the most knowledgeable and energetic pioneers involved in the "growing up" of Alaska's gold and copper mining industries. Perhaps the use of the word "pioneer" is misplaced, since Dunkle came to Alaska 12 years after the original gold strikes at Nome in 1899 had started the gold rush. He was, however, one of the key people who recognized the need to put the industry on a sound financial and engineering footing.

Dunkle's formal training in mining engineering, economics, and chemistry at Yale was impressive and, combined with his natural pragmatism and ability to innovate, was certainly a major factor in his success. Following graduation, he worked briefly in mines in Nevada, but was already on his way to Alaska. The mining community in Alaska was still relatively small, and he soon became a well-respected scout evaluating prospects. This led him to be involved in prospecting for copper in what would eventually become the Kennecott mine in the Wrangell Mountains. He spent much time investigating the geologic origins of the copper deposits and was intimately involved in discoveries that led to the Kennecott's world-class Jumbo copper deposit. Dunkle's abilities as a mining engineer in its broadest sense were recognized quickly, and he became a familiar figure in the New York offices of Guggenheim and other mining magnates, where his advice and expertise were called upon for many enterprises both in Alaska and in other parts of the world. In particular, his work in both South America and Africa greatly broadened his experience.

Dunkle also seemed to have had a knack for getting caught up in adventurous situations. A good example occurred early in his Alaskan career, when he went to assess a potential mineral deposit on the Alaska Peninsula. On his way back to his home base at the Kennecott mine, traveling on the SS *Dora*, he suddenly found himself in the ash raining down from the biggest volcanic eruption in the 20th century, the eruption at Katmai in 1912. He may have been the only geologist to see this eruption firsthand, even though it was from near Kodiak Island.

The Katmai adventure was due to fortuitous timing, but some of Dunkle's exploits were of his own making. It seems that his drive to get things done, see tasks completed, or simply get where he wanted to be pushed him into feats of notable endurance. Some of his Alaskan treks of 100 miles or more on foot, and often alone, boggle the mind. One in particular speaks to both his character and his determination. In 1923, Dunkle was with a reconnaissance party on the north side of the Alaska Range but needed to keep an appointment in Anchorage. To do this, he intended to catch the train at the McKinley station, but realizing that time was very short, he decided instead to try an unknown route up the Muldrow glacier, across Anderson Pass, and down the Chulitna River to Colorado Station. This successful adventure is told in very matter-of-fact language, but conjures up images of a sequence of hair-raising incidents.

In 1928, Dunkle turned his attention to flying as a way to both explore for mines and service them. He used his usual combination of pragmatism and adventure to demonstrate the value of light aircraft. There are many flying stories in this book, not the least of which involves Dunkle's setting off to fly a newly purchased Travel Air from New York to Alaska with only 34 hours of flight time under his belt! Several crashes and quite a while later, he and the plane arrived in Alaska.

One non-flying aviation story may surprise many Alaskan readers. Dunkle's enthusiasm for aviation and flair for engineering led him to be a major force behind the building of a canal to connect the Spenard float pond to Lake Hood, making today's Anchorage float plane base.

Stories of the many trials and tribulations of mining in Alaska thread their way through this book; anyone who knows Alaska will have no trouble recognizing the locations. The Golden Zone Mine near the Chulitna River receives special attention, which is not too surprising, since it is now the author's property. To the many, including me, who have worked out of the mine, the Golden Zone story is absorbing, as are the other mine development stories. All of them bring home the large-scale gamble that