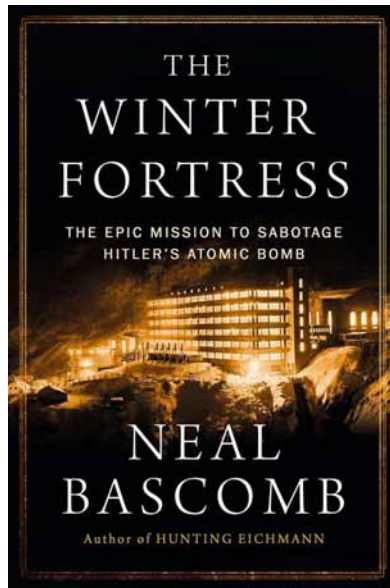


Book Review



Neal Bascomb, *The Winter Fortress: The Epic Mission to Sabotage Hitler's Atomic Bomb*, (Boston: Houghton Mifflin Harcourt), 2016, 400 pages.

By **Jeria Kua**

INTRODUCTION

What if the Nazis had beaten the Allies to the atomic bomb? With a weapon of such raw destructive power at their disposal, there is little doubt that the course of human history would have been reshaped indelibly. Yet, few are aware of the daring commando raid on one of Nazi-occupied Norway's top-secret industrial facilities during World War Two (WWII), which ended Hitler's atomic ambitions for good. In his latest non-fiction work, *New York Times* best-selling author Neal Bascomb takes readers to the heart of the epic, tension-filled battle to foil the Nazis' atomic programme against all odds. Based on an exhaustive trove of previously-classified documents, personal interviews, memoirs and diaries, Bascomb blends his trademark fast-paced, cinematic writing style with the gripping story of a ragtag group of Norwegian men-

turned-commandos who endured some of the toughest physical and mental conditions imaginable to fight for the freedom of their homeland.

VEMORK

The events of the book revolve around Norway's Vemork industrial plant, a veritable castle fortress situated at the edge of the precipitous Måna River gorge on the outskirts of the town of Rjukan.¹ Not only was this imposing structure the world's largest hydroelectric power station at that time, it was also the only source of heavy water—a key ingredient in the new field of atomic fission research and the construction of a nuclear weapon. Realising the potential of this new technology to turn the tide of the war, both Allied and Axis scientists began scrambling to unlock the secrets of the atom, with the control of heavy water

production at Vemork providing a significant strategic advantage.

In a blow to the Allied effort, however, the Nazis launched a surprise invasion of Norway and upon their success ratcheted up heavy water production and fortified the facility. With an ever-increasing flow of the ingredient falling into the hands of the Nazis, the Allies decided that Vemork had to be destroyed at all cost—a mission given to the commandos from the Norwegian Independent Company No. 1 (renamed *Kompani Linge*) under the British Special Operations Executive (SOE).

Right from the start, Bascomb's descriptive language and use of imagery vividly capture both the foreboding physical setting of Vemork and the tension of the atomic race in its early stages. Although his explanation of the physics behind the splitting of the atom is necessary to impress upon readers the significance of destroying the heavy water facility, he does so with clarity and concision and does not detract from the main narrative. However, some basic background knowledge in physics would certainly come in useful.

ASSEMBLING THE TEAM

Delving into the story proper, Bascomb traces the roots of the

Norwegian resistance movement operating from Britain that was ultimately tasked with the mission to destroy Vemork. Formed in 1941, *Kompani Linge* comprised Norwegians from every walk of life—young and old, rich and poor, with and without military experience—who had escaped to Britain to attend special commando training to perform raids and other unconventional missions in Nazi-occupied Norway.² Told through the eyes of thirty-year old Knut Haukelid, we learn of the gruelling, merciless regime this group of men voluntarily endured in order to weaken Hitler's grip on their homeland. After months of tough training, the fresh recruits were sharpened into hardened fighters, ready to be deployed to their native soil when needed.

Central to the running of the unit was Leif Tronstad, a scientist and professor of chemistry at the Norwegian Institute of Technology who plotted against the Nazis from London. Having been responsible for the design and construction of the heavy water facility, he alerted the Allies of Germany's interest in the water and the need to halt their access to it.³ Recognising Tronstad's value to the military, he was appointed to oversee *Kompani Linge's* training, planning and execution

of operations.⁴ The commandos would thus be able to avail themselves of his deep knowledge of Vemork and connections with the local resistance members in Norway to prepare for the eventual raid.

Several other key figures in the heavy water war are also introduced in the opening chapters, including Jomar Brun and Einar Skinnerland, who worked as inside agents in Vemork to supply the Allies with crucial intelligence, and Jens-Anton Poulsson, a commando in charge of leading an advance party on a reconnaissance mission to prepare the site for the main sabotage force. With such a diverse cast, it is clear that this was no simple mission. Like in a well-oiled machine, each had his own crucial part to play in the grand scheme of things. Readers are thus left in anticipation to discover how their individual efforts would interweave later to culminate in the operation's success.

SETBACK

For fear of causing widespread collateral damage, the British authorities decided on a night raid by 30 British Royal Engineers (colloquially known as *sappers*) to destroy Vemork instead of an aerial bombing attack on the plant. Meanwhile, Poulsson and his

team of three other Kompani Linge commandos were parachuted into the Norwegian wilderness as part of *Operation Grouse* to gather more intelligence, establish radio contact with London and facilitate the sappers' insertion to the target. For over a month, the men were forced to endure the biting cold and fierce snowstorms of the *Hardangervidda*—a desolate, 3,500-square mile plateau located 3,000 feet above sea level.⁵ Carrying 560 pounds of equipment, they navigated a distance of 135 miles on foot to their destination at Rjukan, often having to pitch tent out in the open or seek refuge in small hunting cabins in the Vidda while awaiting their orders.⁶ Finally, on 19th November, the sappers were given the green light to deploy. *Operation Freshman* was now underway.

On the evening of 19th November, 1942, two teams of 15 British sappers began their airborne assault mission on Vemork. Under the cover of darkness, they were transported in two Horsa gliders towed by Halifax bomber planes to their landing zone in Norway. However, things quickly began to fall apart. Poor weather conditions had greatly diminished visibility near the landing zone and created violent turbulence. Furthermore, their

Rebecca/Eureka transponding radar system failed to work, leaving the pilots virtually blind. Tragically, both gliders and one of the Halifax bombers crashed and all the sappers were killed either during the accident or by the Germans when they were discovered.

To the readers who followed the sappers through their arduous training for the operation, the futile, sudden and gruesome deaths of these brave young men will no doubt come as a huge shock and resonate deeply. Moreover, Bascomb gives us a glimpse of the cruelty of the Nazis through the detailed depiction of the brutal, merciless torture and execution of the captured sappers as part of Hitler's Commando Order, a stark reminder of the horrors of war.⁷

OPERATION GUNNERSIDE

Despite the catastrophe of Operation Freshman, or perhaps because of it, Tronstad and the SOE high command were determined more than ever to shut down the heavy water production at Vemork. This time, a small group of Norwegian commandos from Kompani Linge would carry out the sabotage. Comfortable with navigating the winter terrain, they would be dropped into the mountains by parachute

and link up with the Grouse team to conduct a combined assault.⁸ However, they faced an even more daunting task than before—now aware of Allied interest in heavy water, the Germans further reinforced Vemork's fortifications and brought several of Tronstad's inside agents in for interrogation and torture. Furthermore, Poulsson and his team would have to continue putting up in the wild in the most extreme of conditions while evading the Nazis until the new *Operation Gunnerside* team could make contact with them.

What follows is an incredible true story of survival as the Grouse team would have to wait for a further three months for the Gunnerside team to deploy into Norway, a true testament to their remarkable determination and grit. Having depleted their food supplies completely, the four suffered constant hunger and had resorted to surviving primarily on a diet of moss, lichen and some reindeer, which left them sickly and physically weak.⁹ On top of that, the psychological struggle was no less intense. Idling their time away in the 'hunger and strain and wind and snow' of the 'faceless, remorseless Vidda,' the men longed for the comfort of home, and seeds of doubt about the success of their mission

began to sow in their minds.¹⁰ The failure of a scheduled Gunnerside deployment in January which nearly cost the crew their lives only compounded their worries. Yet, despite their suffering, the team stuck to their mission faithfully, continuing to maintain regular communication with London, which finally paid off.

On 17th February, 1943, the Gunnerside team of six led by Joachim Rønneberg and second-in-command Knut Haukelid successfully landed in Norway and joined the Grouse team seven days later. On the night of 27th February, they began their assault on Vemork. Descending into the steep Måna River gorge, they crossed the river through a frozen section before successfully completing a dangerous, harrowing climb onto a railway track that lead directly to the plant. Stealthily, the team infiltrated the basement containing the heavy water electrolysis chambers and blew them up with a series of timed explosive charges. Without firing a single shot, they destroyed an estimated six to seven hundred kilogrammes of heavy water, together with the equipment essential to its production—thought to have been enough to cripple the Nazis' supply for about a year.¹¹ Five of the commandos escaped to Sweden after a

gruelling 280-mile trek, while the remaining four remained in Norway to continue their resistance efforts against the Nazis.¹²

Forming the climax of the book, this adrenaline-filled episode truly reads like a fast-paced action thriller, packed with heart-stopping, high-tension moments that leave readers on the edge, such as when one of the commandos nearly fell during the climb, or when the team was unexpectedly discovered by a Norwegian worker in the plant who co-operated with them. Readers are also left in admiration of the extraordinary skill, discipline and courage displayed by the commandos despite it being their first proper mission as soldiers, a testament to their countless hours of training and practice back in Britain under the guidance of Tronstad.

COUP DE GRÂCE

Although the sabotage mission was a resounding success, the Nazis, refusing to be fazed by the attack, undertook round-the-clock repair work on the plant and managed to resume heavy water production within a mere two months—a tremendous shock to the Allies.¹³ With a repeat commando raid out of the question, the Allies conducted a massive bombing raid of 140 aircraft on

Rjukan in November 1943, despite promising otherwise to Tronstad.¹⁴ Although it had caused many civilian casualties and failed to deal any damage to the basement heavy water production facility at Vemork as Tronstad had predicted, the threat of continued air raids which would incur heavy losses compelled the Nazis to abandon the plant for good.

The saboteurs, however, soon uncovered a plan to transport the plant's heavy water production equipment along with all existing stocks of heavy water to Germany, where a new plant could be constructed.¹⁵ To deal the *coup de grâce* to the Nazis, a three-man team led by Haukelid was sent to destroy the cargo en route. They had determined that the weakest link in the journey was a shipment via the ferry *SF Hydro* over Lake Tinnsjø, and on the night of 19th February, 1944, infiltrated it undetected and planted a timed explosive charge. Although they had specially timed the detonation to limit the number of civilian casualties as far as possible, the resulting explosion on the following day claimed the lives of 26 people.¹⁶ The hard-fought heavy water war, however, was finally over, along with the Nazis' hopes of constructing an atomic bomb.

CONCLUSION

"You have to fight for your freedom and for peace. You have to fight for it every day, to keep it. It's like a glass boat; it's easy to break. It's easy to lose."

- Joachim Rønneberg, leader of Operation Gunnerside¹⁷

With the benefit of hindsight, it is easy for us to place the heroic deeds of the Norwegian commandos in the context of the atomic race as one of the reasons for the failure of the Nazis' atomic programme, which could certainly have turned the tide of the war. Yet, at the time of the sabotage operation, the nascent stage of nuclear science meant that the Kompani Linge men had no knowledge of how their target at Vemork could possibly have been of such value.¹⁸ Instead of seeking to make history or chasing public recognition, they chose to fight only to weaken the German war machine and bring the liberation of their homeland within closer reach.¹⁹ It would perhaps have taken the dropping of the first two atomic bombs in human history by the United States for them to realise the full significance of the actions. Moreover, in spite of the numerous decorations and accolades showered upon them at

the end of the war, the saboteurs continually played down their roles in the Vemork raid and gave credit to the local population in Rjukan who had supported their resistance efforts and borne the brunt of Nazi cruelty. Their admirable actions indeed offered us lessons in the values of dedication, selflessness and humility.

In addition, a recurring theme in the book is the idea of sacrifice. The doomed November raid by the British sappers alone claimed the lives of the 30 brave young men and their pilots, while the Norwegian commandos were pushed to their physical limits, from the tough SOE training in Britain to the tempestuous blizzards of the Norwegian Vidda. The tremendous toll on their bodies, however, was only one facet of the suffering they had to endure. With their work shrouded in secrecy, they were unable to do anything except bear the emotional pain in silence when their friends and family were taken in for interrogation or torture by the Nazis. Haukelid's father died in 1944 under Nazi captivity, while Tronstad was killed during a mission in Norway in the final months of the war. Furthermore, several of the men had to shoulder the guilt of having killed innocent Norwegians during

the sinking of the *SF Hydro* for the rest of their lives. Bascomb reminds us that beneath their bold and tough exteriors, the commandos were all human like any one of us who longed for happiness in the company of their loved ones. Knowing that freedom comes at a price, they chose to lay their lives down to achieve that ideal regardless of the cost.

In conclusion, *The Winter Fortress* is truly a riveting glimpse into one of the most daring, successful, but often overlooked operations in WWII. Above all, it is an inspiring tale of the indomitable fighting spirit, tenacity and loyalty of the Norwegian people in their nation's darkest hour. 🌍

ENDNOTES

1. Neal Bascomb, *The Winter Fortress: The Epic Mission to Sabotage Hitler's Atomic Bomb*, (Boston: Houghton Mifflin Harcourt), xviii.
2. *Ibid.*, 30.
3. *Ibid.*, 23.
4. *Ibid.*, 43.
5. *Ibid.*, 87.
6. *Ibid.*, 97.
7. *Ibid.*, 120.
8. *Ibid.*, 118-119.

9. Ibid., 145.
10. Ibid., 166.
11. Ibid., 221-222.
12. Ibid., 186.
13. Ibid., 242.
14. "1943: The Heroes of Telemark," (*Hydro*, 2007), <http://www.hydro.com/en/About-Hydro/Our-history/1929---1945/1943-The-Heroes-of-Telemark/>.
15. Neal Bascomb, *The Winter Fortress: The Epic Mission to Sabotage Hitler's Atomic Bomb*, (Boston: Houghton Mifflin Harcourt), 277.
16. Ibid., 306.
17. Ibid., 322.
18. Ibid., 320.
19. Ibid., xviii.