



Photo: U.S. Coast Guard

U.S. Coast Guard Cutter *Northland* on the wartime Greenland Patrol.

SHIPWRECKED GERMAN WEATHERMEN WINTER IN ICE CAVES ON SHANNON ISLAND, NORTHEAST GREENLAND

By Arnold Court

CAVES dug into a snowdrift on Shannon Island housed 21 men for five months at the last wartime German weather station to be “successfully active in Greenland,” making and transmitting weather observations thrice daily; five other men lived in a crude hut. How their ship was beset and eventually abandoned, and how they existed through the winter until evacuated by air on 3 June 1944, is recounted by Dr. E. G. Triloff of Holzminden in the 1946 and 1947 issues of *Polarforschung*, published respectively in January and August of 1948 in Kiel, Germany.

Except for an opening reference to other weather stations in Greenland, Spitsbergen, and Franz Josef Land, Triloff does not mention any similar attempts. But from other sources it appears that, out of at least

seven German stations whose establishment in Greenland was attempted, only one other operated through a winter. Three stations were captured within a few days after their establishment in the falls of 1940, 1941, and 1944, and two others were intercepted before landing, in 1940 and 1945 ("The Coast Guard at War: Greenland Patrol, II", unpublished document, U.S.C.G., Washington, 1945, pp. 162-204; 'Det Grönlandske Selskabs Aarskrift 1946' (Greenland Society Yearbook) pp. 168-185).

As the war progressed, the Germans tried to establish their Greenland stations farther and farther north. Their first attempt was near Cape Biot (72° N.), where a detachment was captured in the fall of 1940 by the Free Norwegians, whose ship, the *Fridtjof Nansen*, also captured the *Furenak*, which had landed the party, and the *Veslekari*, with a second group on board.

The next year, a 3-man detachment in Young Sound (74°15N.) and the *Buskoe*, from which they had landed, were captured by the U.S. Coast Guard Cutter *Northland* on September 12 and 13. The *Buskoe* was the first U.S. naval prize of the war.

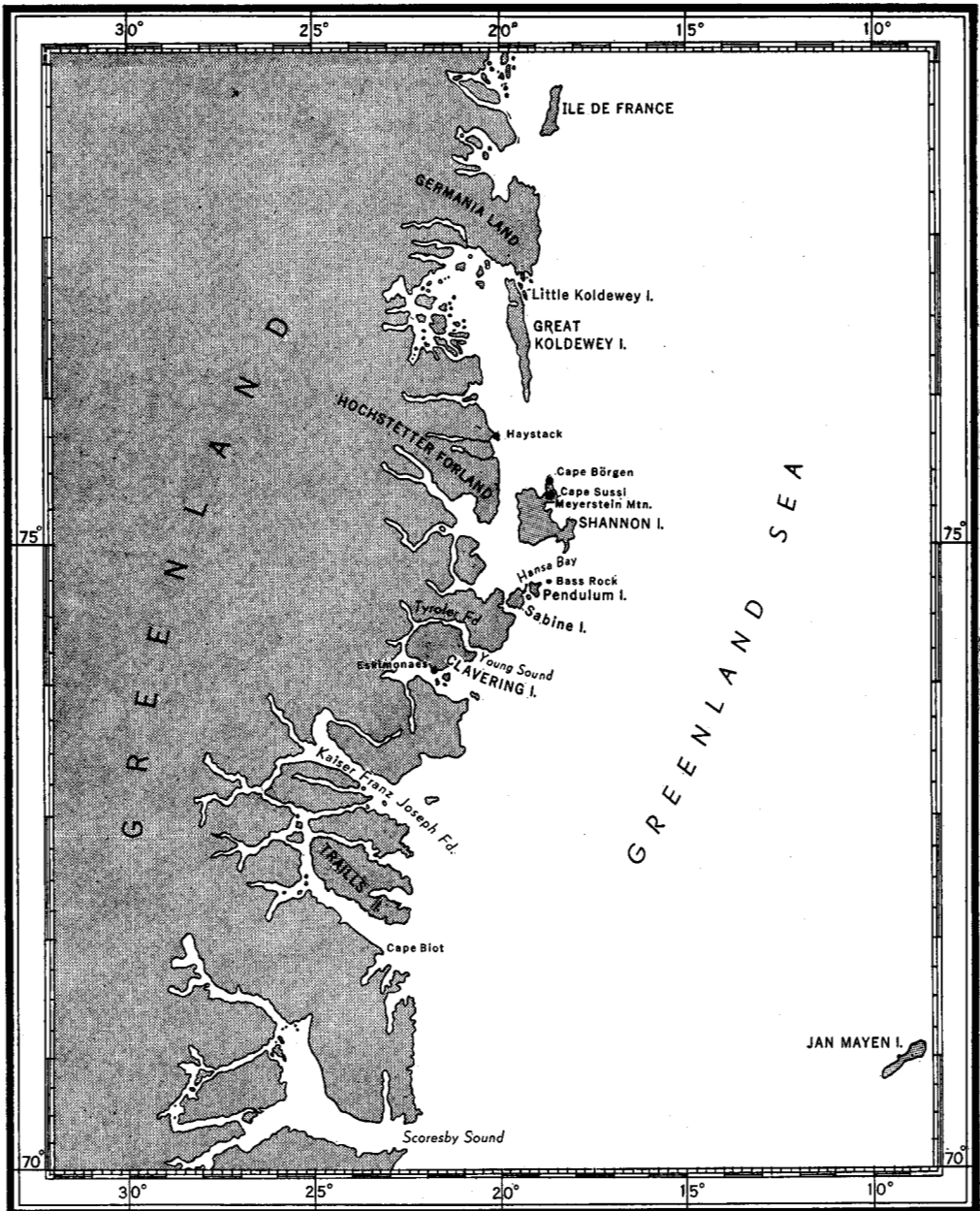
In 1942, a station established in Hansa Bay on Sabine Island (74°40N.) on August 26 operated until it was so badly bombed by U.S. aircraft from Iceland on 25 May 1943 that it was destroyed and abandoned. During the winter, the detachment commander was captured by a Danish scout of the Greenland Sledge Patrol, and the camp physician was found on 23 July 1943, by a landing party from the U.S. cutter *Northland* (as described by Col. Bernt Balchen and Maj. Corey Ford in 'War Below Zero', Houghton-Mifflin, 1944).

The following winter Triloff's party provided the Germans with weather reports from Shannon Island, 40 miles still farther north (75°20'), going undetected until spring and departing before they could be attacked in force.

For the final winter of the war, two German parties were sent out. The first was captured on September 1 when its ship was overtaken in open ice just east of the south tip of Great Koldewey (75°57N.) and scuttled, the 28 men surrendering to the *Northland*. The second was seized in a pre-dawn attack on October 4, a few days after landing on the southeast end of the north island of Little Koldewey (76°40N.); the U.S.C.G.C. *Eastwind*'s landing party captured 3 officers, 9 men, and 1 dog. The *Externsteine*, from which they had landed, was beset, and was captured, with its crew of 20, by the *Eastwind* at midnight on October 16.

Failure of Plan

Triloff's account of the winter hardships of the 1943-44 detachment is largely personal, and does not mention the military organization or



operation of the camp. His relatively few factual observations are retained in the following condensation, in which information from other sources has been interpolated.

Because weather observations were desired by the German authorities from as far north as possible, the *Coburg*, a steamer reinforced for ice navigation, was ordered late in the summer of 1943 to proceed west

along the 77th parallel, deposit a 9-man weather detachment on Germania Land or on Great Koldewey, and return to Norway. The East Greenland Ice had never before been crossed as far north as 77°, and Triloff concludes that it cannot be done by anything less than a powerful ice-breaker.

The *Coburg*, delayed in port many days, entered the pack at 77°N. on 30 August 1943, and after 12 days of manoeuvring and blasting was still 20 km. from Ile de France Island, just north of Germania Land. On September 10, she was beset in a floe about 1 km. across. "Day and night we fought in vain to free ourselves from the imprisonment of the large ice-cake; twice we were supplied with ice blasting material by air. After three weeks we had to give up our fruitless efforts and prepare for wintering in the pack."

The day the *Coburg* entered the pack, the cutter *Northland*, which had earlier destroyed the abandoned Sabine Island base, concluded a 3-week search of Hochstetter Bay and Shannon Sound, including Shannon Island, which the *Coburg* eventually reached. "Haystack, in Latitude 75-42 N., was the northern limit [of] possible access, for above that the shore ice was unbroken, with pack ice close against it offshore." (Coast Guard p. 174).

On October 2 the floe holding the *Coburg* split, when she was off northern Great Koldewey, the original goal. Despite worsening ice conditions the crew tried vainly to work closer to land, laboriously pushing northward during the day in the available leads only to drift farther south each night. However, a NNW storm on October 16 drove her through the drift ice stream and the ship was moored to non-moving ice about 8 km. off Shannon Island. The intervening solidly-cemented ice apparently was mostly old sea-ice with some small bergs and, except in pressure areas, covered with firn.

Shannon, roughly 40 miles square with a large bay on the east side, is the lowest of the large islands fringing the Greenland coast, and lies south of Great Koldewey and northeast of Sabine Island. The ship was closest to the rugged northeastern peninsula on which is the island's highest point, Mt. Meyerstein, about 1,000 feet high. Except for this peninsula, the less rugged southeastern peninsula, and some low hills along the intervening eastern shore, Shannon is very low, and the western half is swampy in summer ('The Arctic Pilot, vol. II'. The British Admiralty, London, 1934).

In 1909, Captain Ejnar Mikkelsen put his ship, the *Alabama*, into winter quarters off Shannon Island. After his long journey in the spring of 1910 with Iver P. Iversen, he returned in November to find the ship

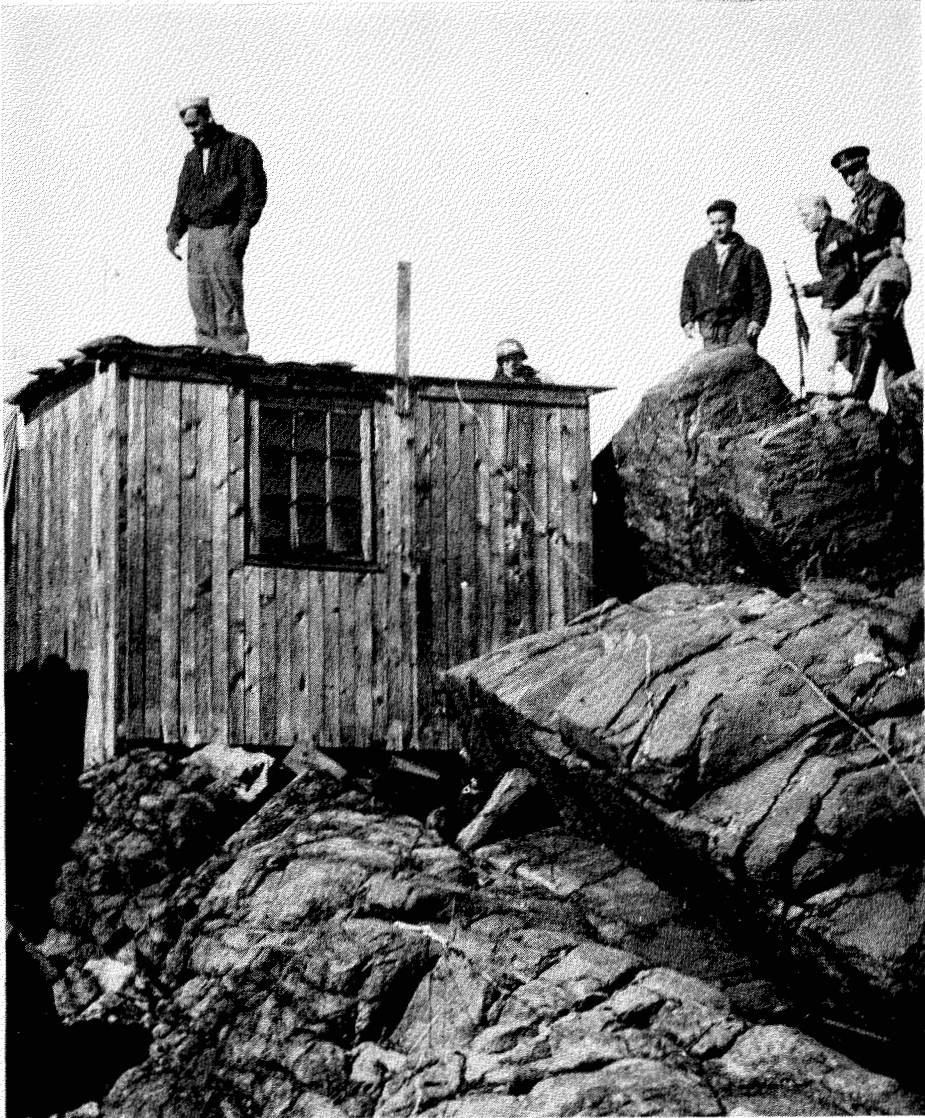


Photo: U.S. Coast Guard

German weather party's abandoned hut on Shannon Island inspected by U.S. Coast Guardsmen.

sunk and the rest of the expedition gone. The two men spent the winter of 1910-11 in a hut on Cape Sussi, built from the timbers of the ship, and the following winter on the Bass Rock, to the south of Shannon Island. Apparently the wartime German party did not find Mikkelsen's hut, though their camp must have been very near to its site.

Wintering preparations

With the ship ice-locked until spring, the 18-man crew prepared to winter on board along with the 9-man meteorological detachment. Much

equipment was stored in a small hut erected on a solid floe half-way to shore. Other supplies, chiefly lumber and fuel placed on the ice near the ship, were lost on November 19 when a NNW storm, with winds up to force 12 (over 75 mph.), broke the ice loose and blew it into the drift stream; the *Coburg* was pushed onto a small iceberg at an angle of 31°, bow in air and stern awash, making evacuation advisable.

Hurriedly, all supplies were removed from the half-way hut and some 20 bunks were improvised, occupying almost the entire space; "the only advantage derived from these forcibly crowded conditions was the warmth which usually prevailed when all occupants were assembled." Weather observing and radio schedules were continued on the ship until a second radio could be set up on shore.

After a few weeks' occupancy, the half-way hut had settled so far into its floe that on Christmas Day water seeped through and froze. As fast as the ice was chopped out, more water came in, so that "the meagre space available for 20 men was now further diminished by a layer of ice 30 cm. thick, up to the lower rows of bunks." There was a general exodus to shore, where two men were already established in caves.

They had tunnelled 12 m. into a drift of hard snow 3 m. deep which filled the shore end of a 40 m. wide rock-walled gully. Off the tunnel, 1.5 m. high and 1 m. wide, four rooms were excavated, each 2.5 m. square and 1.8 m. high, and tents were pitched in two of them, since all the lumber had drifted away in October. The other rooms were used for storage. A thick ice layer floored the tunnel-and-room system and firn-layer banding marked the walls. Only two ice axes and some aluminum avalanche shovels, too light for digging, were available; excavated snow was dragged out on a piece of canvas. Eventually five such tunnel-and-cave systems contained seven tents housing 21 men.

Winter hauling and weather

From mid-October until mid-March the men were busy hauling equipment and supplies from ship to ice-camp to shore. Their light sleds wore out quickly, and improvised sleds were hard to pull, so eventually they relied almost entirely on back-packing. Strongly prejudiced against this method at first, "after a few days we became used to it, and thenceforth usually made one or two trips daily," weather permitting, carrying about 35 kg. some 4 km.

Using packboards, "each of us could see just what he had accomplished during the day, while sledging encouraged one to exaggerate his share and deprecate the part of his companions." Sleds were used only for loads too heavy for one man to carry, like radio equipment and

hydrogen tanks; very few men used skis. Although the route was marked by poles 100 m. apart, storms and darkness permitted trips only every other day, on the average.

Storms, almost always from the NW or NNW, blew every four to six days during the winter, usually with heavy snow, and with drift as well when the wind was force 4 (15 mph.) or higher; "snow never fell during calms or light winds." Consequently, long snowdrifts built up to leeward of all objects; after one month, a drift was flush with the ship's bow, 3 m. above the ice, and the drift behind the half-way hut not only made door excavation a problem but may have contributed to the settling which eventually forced the hut's abandonment.

The lowest temperature, -38.8°C (-37.8°F), "came about Christmas in an almost complete calm." The highest of the stay, $+8.4^{\circ}\text{C}$ (47.1°F), was on February 21, in the middle of a two-day foehn (chinook), the only real foehn of the winter, which raised the temperature from -32°C to $+1^{\circ}\text{C}$ (-25.6°F to $+33.8^{\circ}\text{F}$) in 12 hours. Snow picked up by the west wind in crossing the island choked the tunnel entries, but as soon as the temperature went above freezing the snow stopped blowing. The solid pack-ice offshore broke up, with green water leads near shore, and the remaining inhabitants of the half-way hut fled to shore; a long lead opened behind the ship, whose floe broke loose and drifted south with her several kilometres.

At noon on February 22 the foehn was suddenly replaced by a cold W to NNW wind, which dropped temperatures to below -25°C and compacted and refroze the pack-ice: "the short dream of spring was over, and we were again in the midst of the arctic winter. After a few days, as far as we could see, the ice-field was again solid, and with it the ship," still tilted 31° but a few metres deeper in the ice. However, the storm-glazed pack-ice now afforded excellent sledging: one man could pull three food boxes, totalling 85 kg., on a sled made of two skis kept about 15 cm. apart.

Tent hibernation

Except when weather permitted transporting supplies, and during other essential tasks, the men spent all their time lying in their tents. They could not sit or stand because, to save fuel, the tent peaks were cut down, in the coldest weather to only 1 m.; new settlers always pitched tents high enough to stand in, but soon learned to prefer crowding to cold. In the tents, supply boxes covered with sleeping bags lined both sides, the primus stove was in the narrow aisle, and the lamp was atop a food locker at the far end.

Only $\frac{1}{4}$ litre of gasoline was allowed per tent per day, permitting only one warm meal and "we could warm our hands only briefly after our weather observations. Yet, as long as we lived in the tent, the temperature never fell below -15°C ($+5.0^{\circ}\text{F}$). We all became used to the cold in an unexpectedly short time and, after initial experiments, we habitually shed all our warm clothes when we entered our sleeping bags at night, and made entries in our logs with gloveless, bare fingers without effort when the temperature was a few degrees below freezing."

Lighting the primus stove warmed the tent quickly, so that although the floor was below freezing, "about a half-metre above the floor, where the head and hands were, it could be 5°C , and under the ceiling even 15°C ." This caused melting water to run down the tent walls and freeze on the floor, and also caused the cave roofs to sag so that they had to be trimmed off periodically—a very disagreeable task because it meant striking the tent, chopping, hauling out ice and snow, and repitching the tent.

During storms snow drifts in the tunnels had to be shovelled out continually, for later they might be impossible to remove. Besides, they restricted ventilation so that "we awoke with headaches, matches were lighted with great difficulty, a candle burnt with a weak flame, and one man fainted when he was about to leave the tent." Once four men were almost asphyxiated by battery fumes because of a snow-clogged vent. During strong NW storms gusts of wind coming over the island caused a rhythmic noise which made the ears sore; although the tent walls did not move, the aneroid needle fluctuated about 2 mb. and the barograph made a thick, jagged trace.

Spring, thaw and rescue

Increasing sunshine in spring brought warmer temperatures, permitting tents to be raised to allow sitting on bunks. Soon the cave ceilings began to melt despite vents improvised from empty cans, and one roof developed a small but growing hole past which blizzards blew without depositing much snow. "We were glad that most of our belongings were already on shore. . . . Transport over solid ice in darkness was easier than on soft, loose snow in continuous sunshine."

In late spring, snow came not only with NNW storms, as in winter, but also during calms or light E winds; by May, with the temperature above freezing most of the day, melting exceeded snowfall. "At the end of April, all the ship's equipment was transferred to shore owing to war measures."

Earlier that month, the Greenland Sledge Patrol had found suspicious signs around Cape Sussi, the northeastern tip of Shannon Island. Leaving



Coburg, beset and abandoned, inspected by party from U.S.C.G.C. *Northland*, in background. Photo: U.S. Coast Guard

his 8-man detachment behind, the captain advanced alone and “saw a well supplied and well fortified base. While watching the changing of sentries, which took place every half hour, he was surprised from the rear by a bearded Nazi officer”, (Coast Guard, p. 180) whom he killed in a gun duel; the captain then withdrew with his patrol in the face of superior force.

On June 3 a rescue plane landed on “an ice-plain several km. long in the large bay south of the mountainous northeast part of the island; only here can undisturbed new ice form in the fall, unaffected by the drift stream to the east.” The first cracks had appeared on the east side of this bay (Nordenskiöld Bay?) late in May, also many seals.

On the flight to Trondheim, the pack-ice east of the island seemed unchanged since the February storm, and the *Coburg* was still beached on its iceberg. In only one hour the rescued party crossed “the limitless

stream of moving ice" in which they had struggled for 50 days the previous fall.

Six weeks after the evacuation, two cutters, after several attempts, landed a strong Army and Coast Guard detachment which found and burned "a deserted Nazi building, so well camouflaged that it could be seen only from a certain angle. From the remains of smashed instruments it was evident that the Germans had fled hastily. In ice caves near the building, the landing forces found a large stock of gasoline, food, and ammunition. They also discovered parts of a radio capable of communicating direct with Germany", and the grave of Lt. E. Zacher, dated 24.4.44. (Coast Guard, p. 180).

Departing, the *Northland* sighted the *Coburg*, which air reconnaissance indicated was abandoned. A 16-man party crossed the sea ice and reported that "An explosion within her hull had holed her badly and she was entirely gutted by fire. From the litter around the ship, it was evident that the German crew and the expeditionary passengers had moved all the food, ammunition, and other supplies to the ice and then to the shore building, where they had lived for some time. The two anti-aircraft guns had been removed from the ship and set up on the ice nearby" (Coast Guard, p. 182).

Although they lost their ship, and wintered under rather primitive conditions, Triloff says his expedition was a success: they "essentially fulfilled the meteorological duties, with perfect regularity," even though it involved living in ice caves.