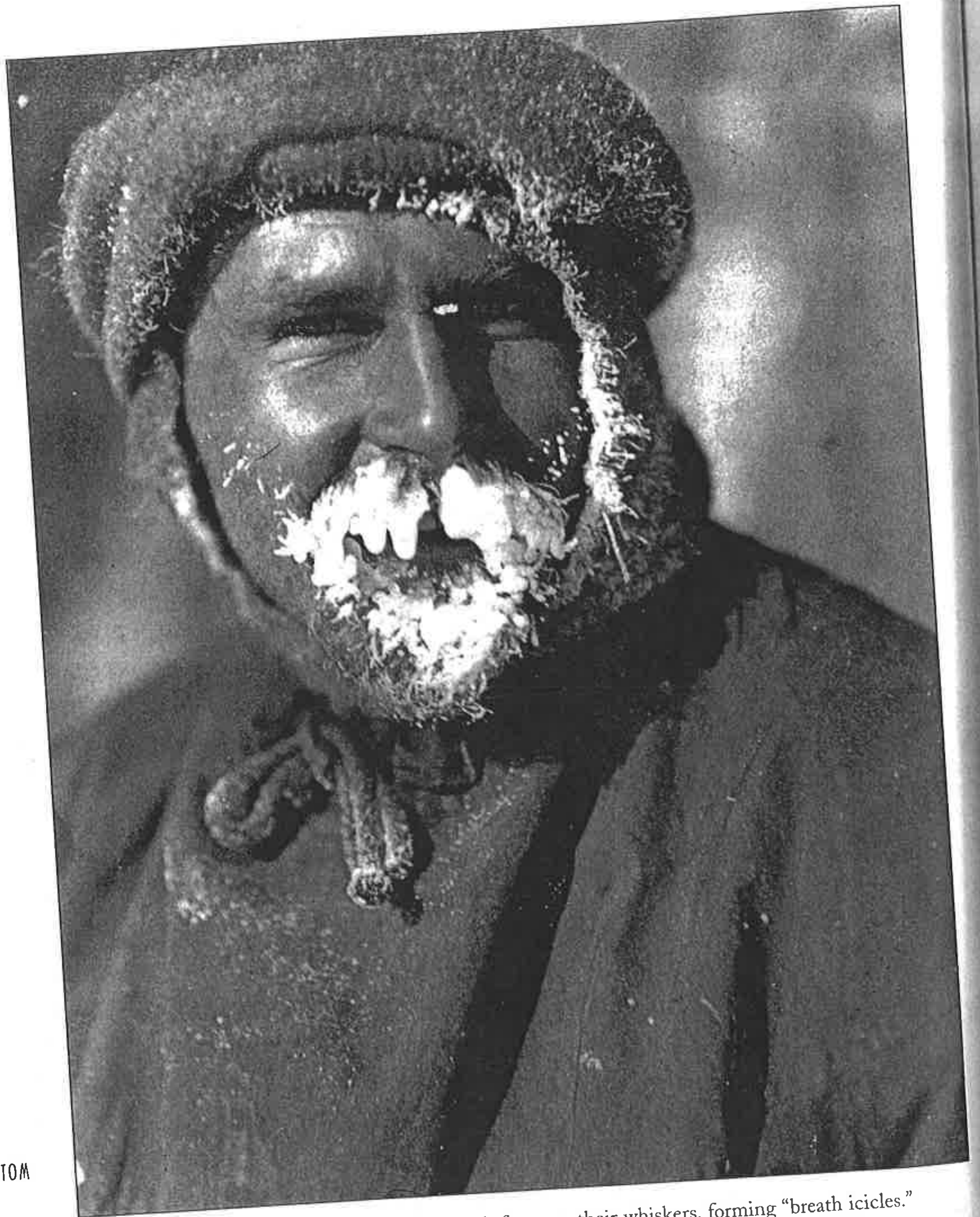

In the frigid air, moisture from the men's breath froze on their whiskers, forming "breath icicles." Lionel Greenstreet, the first officer, posed for this picture illustrating the effect.

off, tearing a bit of skin at the same time. Dog bites and knife nicks on the men's hands were frequently infected with seal blood, but there were no antibiotics to treat the inflammation.

When the surface of the floe was firm enough, the men would exercise by marching back and forth, always on the lookout for predatory leopard seals. Some of the men were morbidly convinced that a killer whale would crash upward through their dwindling floe, tossing them all into the water and picking them off one by one. They became obsessed with the wind—its direction, its speed, its temperature. They were all miserable, cold, and completely filthy, since the last of the soap had been saved for Green, who stood all day in the greasy smoke of the blubber stoves. They began calling their forced imprisonment "The Ice Age."

The games and amusements that had passed the time for them on board *Endurance* were forgotten; no one had the heart for charades or poetry recitals or comic songs. The monotony was punctuated by meals; between meals, they waited for the next. They read and reread their small stock of books. Watches were kept for seals, and if the ice was favorable, a hunting party would go out to kill them. Very often, there were no seals. They ate penguins when they could get them. Twenty penguins, cooked by the fuel of their own skins, was a fair daily average, Hurley said later. Young penguins were tasty enough, much like chicken, but the older penguins were difficult to cut with a knife and almost impossible to chew.

"The worst thing is having to kill time," James wrote in his diary. "It seems such a waste, yet there is nothing else to do."

McNeish wrote, "There is nothing for it but to get in our sleeping bags and smoke away the hunger."

"The water is drip-dripping from the tent roof," Macklin wrote in his diary. "I pray God to give us dry weather soon, for this is misery. I have never seen such depression of spirits as there is in the tent."

The Boss knew how dire their plight was. Almost every night, he shouted himself awake from nightmares in which he pictured one disaster or emergency after another. Would the boats be separated when they took to the ocean? Would he himself be incapacitated? Would Worsley's navigational books be

lost? Would they run out of food? One after another, disasters visited his sleep and shook him awake. Then, in the remaining hours of the night, he would form plans for meeting the crises he had dreamed of.

In spite of his anxiety, he tried to keep up the appearance of calm in order to maintain morale. Although tortured by worry, he remained outwardly unperturbed. "He was always cheerful, and gave everyone confidence that we would get out," said Bakewell, oblivious of the Boss's unease.

Shackleton believed that keeping to some pretense of normal routine would calm the men's nerves and settle their fears. Meals were served strictly according to schedule. Watches were rotated regularly. He woke the men by whistle every morning and gave the order to "lash up and stow." For his own sanity, Shackleton played bridge and taught others how to play. He also played exactly four hands of poker with Hurley every afternoon. By the end of ten weeks, he had won imaginary tickets to all the London theaters, boxes of linen handkerchiefs, silk umbrellas, a mirror, and a coveted collector's copy of *Paradise Regained* from Hurley, while Hurley had won from Shackleton a shaving mirror, several top hats, enough walking sticks to equip a regiment, several sets of cuff links, and a library of books, as well as dinner at Claridge's Hotel in London and a box at the opera.

Remain calm. Keep to the normal routines. "Patience. Patience. Patience," the Boss wrote in his diary.

On February 8, one of the men found a twig tangled in some seaweed, and the crew gathered around as the twig was fed to the fire. The scent of burning wood reminded everyone of land so far away, and sunk many of the men into nostalgia and fresh pangs of homesickness.

On February 20, the crew awoke to find that their floe had been invaded by an enormous flock of Adélie penguins migrating north. Each man fell to the task of killing as many as he could. With no natural enemies out of the water, the penguins were easy to catch. Although the birds did not provide much meat, their skins, lined with a thick layer of fat, made a good fuel for the blubber stove. Over the next two days, the crew had brought in more than 600 Adélies. Then the flock moved on, and the ice around Patience Camp was streaked with blood and red penguin guano.

The crew continued to wait. The days dragged slowly on, growing shorter as autumn set in. The weather was gray, rainy, cold, and damp. The ice pack continued its slow, enormous revolution north through the Weddell Sea. When the blubber supply ran alarmingly low, Shackleton reduced the ration of warm drinks to one a day. All their hopes were now pinned on getting safely to the open ocean before the floe they camped on broke into pieces. If the pack disintegrated too soon, they would be unable to launch the boats and maneuver in the jumble of broken and grinding ice, and unable to find a floe large enough to camp on.

"Day passes day with very little or nothing to relieve the monotony," Greenstreet wrote in his diary on March 5. "We take constitutionals round and round the floe but no one can go further as we are to all intents and purposes on an island. There is practically nothing fresh to read and nothing to talk about, all topics being absolutely exhausted. . . . The pack around looks very much as it did four or five months ago and with the low temperature we have been getting at night, i.e., zero and below, the open patches of water get covered with young ice which is neither fit to go over nor would allow the passage of the boats."

It was more than a year since *Endurance* had first become stuck in the ice. Some of the men were dangerously close to believing they would never get out of the ice at all.

On March 9, for the first time since entering the pack, the men felt the swell of the ocean slowly lift the ice under their feet. Around them, the pack was creaking and groaning rhythmically, like the breathing of an immense animal. The open ocean was thirty miles away.

INTO THE BOATS

How did they know where they were? Since the outset of their voyage through featureless ocean and anonymous ice pack, the officers and crew of *Endurance* had been able to track their exact location and chart their zigzagging progress on their maps. This was before the use of radio signals to plot position, before radar, before satellites. They used a few basic instruments, some almanacs, and math.

For centuries, mapmakers, astronomers, and navigators have marked the globe with imaginary lines of latitude, which are parallel to the equator (and are often called parallels), and lines of longitude (also called meridians), great circles that all run through the North and South poles. The meridians are perpendicular to the parallels on the surface of the globe; that is, they meet at right angles, or ninety degrees. When a navigator knows his coordinates—the degree of latitude and degree of longitude he is at—he knows where on the wide, blank ocean he is. But how *does* he know the latitude and longitude?

Astronomers have long known that the celestial bodies—the sun, the moon, the planets, and the stars—follow regular and predictable paths through the heavens, and centuries of patient nighttime observation have produced detailed almanacs listing the daily positions of these bodies. As a navigator moves farther north or south, the height of a star above the horizon changes. Using an instrument called a sextant, the navigator can measure the height of the star above the horizon. Then, by referring to the almanacs and making some calculations, he can determine how far north or south he is: that is his latitude. No matter where on the globe the observer is, an accurate measurement of that star's height, or altitude, and the use of proper almanacs or tables will provide latitude.

Longitude proved to be a harder puzzle to solve. Astronomers have known for centuries that the earth takes twenty-four hours to complete one full rotation—one day. Because a circle (one rotation) is 360 degrees, it is possible to divide 360 by twenty-four to find out how many degrees the earth spins in just one hour. The answer is fifteen degrees. With that information, longitude is within reach—assuming accurate clocks. Imagine a traveler going west with two clocks. After several days, it is no longer noon when the clocks say twelve. So the traveler adjusts

the first clock to read twelve when it is noon where he is. The second clock tells a different time, the time at the starting point. If the difference in time is one hour, the traveler knows he has gone fifteen degrees. He can continue to travel as long as he wants, always resetting the first clock at noon, when the sun is at its highest point in the sky. As long as he continues to wind the second clock, and as long as it is accurate, he will know the time difference between his present position and his starting point. He can then convert the difference in time to a distance in degrees.

This makes accurate clocks indispensable on ocean voyages, but it wasn't until the eighteenth century that accurate clocks became a reality. In 1714, the British Parliament offered a prize to the person who could solve the longitude puzzle. Decades later, the prize was awarded to a clockmaker, John Harrison. The mechanism of Harrison's chronometer could withstand the turbulent motion of a ship at sea, defy changes of temperature, and resist the corrosion of salt water and air. His first three models were large, clumsy, heavy instruments, but his final masterpiece was not much larger than a heavy pocket watch. Any captain could take such a timekeeper to sea with him. Harrison had solved the problem of fixing longitude.

By 1914, when *Endurance* set sail from London, dependable and accurate chronometers were every skipper's constant companions. Armed with sextant, chronometers, compass, and nautical tables, Frank Worsley, skipper of *Endurance,* had been able to calculate and plot their every position. He was able to judge the pack's rate of travel by comparing positions from one day to the next. He knew how far they were from the nearest land; he knew when they had crossed the Antarctic Circle; he knew how many miles of forbidding ocean still lay between the crew and their home. Of course, there were many days on the ice when getting a sight from the heavens was impossible. Fog, cloud cover, blizzard conditions, rain, and foul weather of every description often hid the sun and stars from Worsley's sight. But whenever the sun made an appearance, he was sure to take as many readings as he could. The big box chronometers on the ship had been abandoned at Dump Camp, but Worsley had chronometer watches. He periodically checked their accuracy by taking a kind of astronomical reading called an occultation. Most astronomers use the moon or the major planets for their occultations: Worsley used tiny Mercury once, "just for swank," to show he could do it.

Nobody liked to think what might happen if Worsley lost any of his instru-

ments or tables. After Shackleton, they looked to the skipper to get them home. How else would they find their way?

Now, after the initial excitement of the ocean swell, the men began to grow even more restless. For several days the pack closed in tight again, and they could no longer detect the movement of the ocean. But they knew it was out there, not far. The weather was growing fouler every day as the Antarctic winter approached, with hard frosts and cold rain. Ice began to build up under the sledge runners beneath the boats, and the crew had to shift the boats from one site to another to keep them from freezing in place: they had to be ready to launch at any moment. Every morning they lashed up and stowed their gear.

But the ice around them still didn't open. On March 23, they spied land to the west, probably one of the Danger Islands at the entrance to Erebus and Terror Gulf—a scant fifty-seven miles away. "If the ice opens we could land in a day," Hurley lamented in his diary. Yet the ice pack, with Patience Camp and its twenty-eight frustrated and helpless men, drifted past.

The men busied themselves with repairs to clothing and equipment, readying themselves for the next stage of the journey. Now there were always at least two men on watch as the stubborn ice began eroding. A biting southerly gale intensified the cold at the same time that the blubber supply ran alarmingly low. Hot food was limited to once a day; the other meals were cold and comfortless.

Four days after Patience Camp passed the Danger Islands, icebergs began bulldozing through the pack. The bergs, with their deep bottoms caught in opposing currents, crashed in zigzagging paths through the ice as far as the men could see. Horrified, the crew of *Endurance* watched as one large berg began plowing in slow motion toward their position. Huge blocks of ice tumbled out of its path, and large floes were churned into chunks. Some of the men swallowed hard and shook hands with their mates. They all knew that if the berg plowed through their camp, there would be no hope of survival, and trying to get out of its unpredictable path was pointless. Shackleton scratched a match alight with his thumbnail, then lit a cigarette as the rogue iceberg blundered toward them.

The men watched it come closer and closer, breathing a sigh of relief when it veered away and passed them to the east. They were spared—for now.

As March continued, the weather turned to rain and then to snow, and the

men crawled into their damp sleeping bags in complete, wretched misery. They were hungry, cold, and frightened. Fights broke out for the flimsiest reasons. Some men cried, their tears freezing on their bearded cheeks. The ice men began to believe that they would never be released from their prison. Shackleton did what he could to encourage his men, going from one tent to the next and asking how they were, or starting conversations on topics totally unrelated to their present dangers.

Then, during the early morning hours of March 28, their floe split in half. "Crack!" came a yell from Cheetham, on watch. "Lash up and stow!" As the men struggled out of their tents, they saw two cracks running through their floe; the edges rose and fell in a strong swell. Each man knew his emergency orders. Some dashed to the boats and began heaving and cracking them out of the night's ice; others broke down the camp and began stowing tents and gear. Macklin rounded up his team of dogs—the last of the dogs—and got them in order. Some of the men saw with alarm that their seal meat supply was on a piece of floe that was beginning to drift away in the heavy mist, so they jumped the widening crack and began tossing the meat over. Once all the men and gear were safe on the same piece of floe with the boats, they began to relax, only to have another crack split directly under the *James Caird.* Another scramble in the chilly, damp morning followed. Finally, they dared to eat a cold breakfast.

Just as they were finishing, a leopard seal loomed through the mist, hunching itself across the ice. Wild ran for his rifle and brought the seal down with one bullet, and when the eleven-foot-long animal was butchered, the men discovered fifty undigested fish inside its stomach. Minutes earlier, the crew had been on short rations eaten cold. Now they had 1,000 pounds of meat and at least two weeks' worth of blubber. Shackleton announced they would make a holiday feast on the seal's liver at lunchtime.

And yet, in spite of the new bounty of food, it was time for the last dogs to go. It was obvious to everyone that the pack was breaking up all around them, and it would be impossible to take the dogs in the boats. Macklin harnessed his team for the last time and drove them some distance from the camp with Wild. Sick with regret, Macklin took his dogs one by one from harness. Wild took each unsuspecting animal behind a hummock of ice and quickly put a bullet in its brain. Then

Macklin skinned and butchered the dogs for meat and brought them back to camp. Later, as the men feasted on the dogs, Worsley commented that the piece he was eating had a better flavor than the leopard seal, and Hurley found it "exquisitely tender and flavorous." As Hurley later wrote, "A casual observer might think the Explorer a frozen-hearted individual, especially if he noticed the mouths watering when tears ought to be expected. Hunger brings us all to the level of other species, and our saying that 'sledge dogs are born for work & bred for food' is but the rationale of experience."

Overhead, terns and Cape pigeons wheeled, and a giant snow petrel flew on snow-white wings; the birds were a sure sign that open water was near. In an open lead of water, Clark spotted some jellyfish, another sign of open ocean. They were very close.

Shackleton now ordered the men to keep "watch and watch," four hours on and four hours off, and to sleep fully dressed in boots, mittens, and hats. The men lay down to sleep on a floe that rose and fell at least a foot with the swell, and some of them felt seasick after so long on a motionless, frozen ocean.

"Our little boats may be compelled any day now to sail unsheltered over the open sea," Shackleton wrote in his diary, "with a thousand leagues of ocean separating them from the land to the north and east. It seems vital that we should land on Clarence Island or its neighbor, Elephant Island." These islands to the northwest were at the very end of the Antarctic Peninsula; beyond them lay the open ocean. If the crew did not reach one of the islands, their chances of survival were very small.

The days continued to wear on, and their floe continued to erode. By April 3, it was only 200 yards across, surrounded by open water and continually bumping into other floes. The sounds of the ice grinding and crushing, creaking and cracking, filled the cold, damp air all around them. All around them, too, were signs that the Antarctic winter was fast approaching: there were now twelve hours of darkness, and during the daylight hours petrels and terns fled toward the north. Skuas kept up a screeching clamor, and penguins on the move honked and brayed from the ice for miles around. Killer whales cruised the open leads, blowing spouts of icy spray. The tricks of the Antarctic atmosphere brought mock suns and green sunsets, and showers of jewel-colored ice crystals.

The floe beneath Patience Camp cracked again and again over the next several days. By April 8, there were open leads of black water on all sides, and the floe was rising and falling three feet with the ocean swell—the ice pack as far as the eye could see was rippling with it, like a box of giant jigsaw puzzle pieces being stirred by a giant hand. The floe was now a mere fifty yards across. The voyagers had traveled 600 miles since *Endurance* was first trapped in the ice.

At twelve forty on April 8, Shackleton gave the order: "Launch the boats."

ESCAPE FROM THE ICE

Thousands of birds accompanied the three boats as the crew got under way. Fulmars, terns, snow petrels, and Cape pigeons filled the sky. The men leaning to the oars were pelted with bird droppings as they tried to accustom themselves to the new circumstances. The sides of all the boats had been raised for protection against rough seas, but that made the seats too low for rowing. The men had to sit awkwardly on crates and packing cases in order to dig their oars into the water at the proper angle. Long out of practice, the rowers fumbled and cursed as they tried to find a rhythm. The wind was bitter, but it was impossible to row fast enough to keep warm—the danger of ramming into the large chunks of brash ice that surrounded them was too great. The swell crashing on the windward side of the great blue tabular icebergs threw spray sixty feet into the air and down onto the boats, where it froze on the men. Those who weren't rowing ducked their heads down against the spray and the bird droppings, and kept a wary eye out for killer whales.

In the lead was the *James Caird,* the largest boat, with Shackleton, Wild, and ten of the men—McIlroy, Wordie, Hussey, James, Clark, Hurley, McCarthy, Green, McNeish, and Vincent. Behind them was the *Dudley Docker,* steered by Worsley and manned by another eight—Greenstreet, Cheetham, Kerr, Macklin, Marston, Orde-Lees, McLeod, and Holness. Bringing up the rear was the *Stancomb Wills,* with Crean and Hudson in command of the remaining five men—Rickinson, How, Bakewell, Stevenson, and Blackborrow, the stowaway, who had good reason to regret his decision to sneak aboard *Endurance.*

The going was slow as they picked a gingerly course through the ice, but they were making progress. Within an hour they had pulled at least a mile away from Patience Camp, which was now lost forever in the broken pack behind them. The men began to think they were truly on their way at last, when a strange rumbling noise reached their ears.

At first they could see nothing, and then from the east-southeast came a thick flow of ice on a riptide current, like a wide river of tumbling, churning

chunks and floes. It was barreling straight toward them at a rate of three miles an hour. With a shout to the other boats, Shackleton brought the *Caird* around, and the men began to row as hard as they could. The riptide was roaring after them, threatening to engulf the three puny boats with a deluge of ice and slush. The men who were not rowing stamped their feet in time to help the rowers keep a steady rhythm with the oars. Twice the *Docker* was almost caught, but each time she pulled clear. For fifteen minutes, the three boats fled from the flood of ice, and then just as suddenly as it had appeared, it faded away, and the water grew calm again. The exhausted rowers collapsed over the oars and were pulled aside by the other men, who took their places. Bobbing blue ice and crumbling floes rose and fell with the waves all around them as they brought the boats back onto a course for the northwest.

They continued pulling all afternoon, still dodging through open leads and around large floes and bergs. As the light began to fade, Shackleton began looking out for a good, strong floe to camp on. Eventually one was spotted, and the men were happy to see it was inhabited by a large crabeater seal. By six thirty all hands were pitching tents, and Green was firing up the blubber stove to make dinner out of the seal. By eight o'clock everyone except the watch was fast asleep with the sound of waves slapping and splashing against the edges of their camp.

But then: "An intangible feeling of uneasiness made me leave my tent about 11 P.M.," Shackleton wrote. The heavy swell had changed and was now crashing into their floe head on. "I had started to walk across the floe to warn the watchman to look carefully for cracks when the floe lifted on the crest of a swell and cracked under my feet as I was passing the men's tent. The men were in one of the dome-shaped tents, and it began to stretch apart as the ice opened. . . . I rushed forward, helped some men to come out from under the canvas. . . . The crack had widened to about four feet, and . . . I saw a whitish object floating in the water."

"Somebody's missing!" one of the men yelled as the tent's occupants scrambled to safety in the darkness.

The whitish object in the water was a sleeping bag with Ernest Holness inside it. The Boss leaned over to grab the sodden bag and heaved it—and

Holness—out of the freezing water and onto the ice, just as the two edges of the floe crashed back together.

Then the crack opened once more, separating the camp. Holness's mates began walking him up and down to warm him, because there were no dry clothes into which he could change. Ice crackled off his clothes and fell tinkling onto the floe as the rest of the crew drew the two halves of the floe together again by hauling on a rope. After sledding the *James Caird* across to the larger piece of floe, the men jumped to safety with the rest of the crew. Shackleton remained behind to ensure that all of his men got over safely.

And the floes began to separate again. Shackleton hauled on his end of the rope, but one man's strength was not equal to the force of the ocean pulling the floes apart. As his crew watched in horror, he drifted out of sight into the darkness.

"Launch a boat," he called, just as Wild gave the same order. The *Stancomb Wills* was shoved into the water to rescue him.

As Worsley commented, "The few minutes that it took to fetch Shackleton were among the most anxious I have ever known."

Once the entire crew was reassembled, it was time to turn their attention to Holness, who was in serious danger of freezing to death. Green fired up the blubber stove in order to get some hot milk into the sailor.

"You all right, Holness?" Shackleton asked him.

"Y-yes, B-b-boss," the man chattered, shivering uncontrollably. "Only thing I'm thinking about is my 'baccy [tobacco] I'd left in the bag."

The men dared not return to their tents. Instead, they sought the warmth of the fire for the rest of the night. "Crowded round the little stove with its smoky flickery blubber flames we looked like hobgoblins," Macklin wrote. Every two hours until morning the cook served another round of seal steaks to keep up the men's strength. In the darkness at the edge of the floe, killer whales spouted gustily.

"In spite of our troubles and losing sleep the whole party was in good spirits, for, at last, we had exchanged inaction for action," Worsley remembered. "We had been waiting and drifting at the mercy of the pack ice. There had been nothing that we could do to escape. Now there were more dangers and

hardships, but we were working and struggling to save ourselves. We were full of hope and optimism—feelings that Shackleton always fostered."

By 5:00 A.M. the first hint of daylight glowed dimly in the east, and daybreak brought a chilly, misty, overcast day with snow squalls driving in ragged veils across the ice. The men were more than ready to leave the unlucky floe behind, and once the boats were launched, they continued rowing through the pack with a cold easterly wind at their cheeks, trying to make their way north as much as the crowding ice allowed. The weather made it impossible to get a sun sight, but Worsley's best guess put Clarence and Elephant isles about thirty or forty miles north.

Throughout the morning they continued to row toward these small landfalls, and then, at about eleven o'clock, they suddenly broke free of the pack and found themselves in open ocean. Amid much rejoicing, the crews of the three small boats raised sail and forged ahead, spray breaking over their bows and freezing on the men and all the contents of the boats.

The rejoicing was short-lived. "We rounded the north end of the pack," Worsley explained, "but found that in the open the sea was too heavy for our deeply laden boats. Besides the weight of twenty-eight men, we had three tents, spare clothing, our sleeping bags, 'Primus' lamps and paraffin, oars, masts, sails, and three weeks' food for the party. . . .

"We returned to the shelter of the pack, unloaded, and hauled the boats up on a floeberg at 3:30 P.M. There we abandoned one week's supply of food. While we pitched the tents and secured the boats, Green raided the abandoned stores. Presently he produced the best and largest meal we had eaten for five months."

They had finally escaped from the pack, but the open ocean had proved too much for their small fleet. They were back in the ice.

chpt 10

PASSAGE TO ELEPHANT ISLAND

The ocean that had chased them back and made them flee for the shelter of the ice pack is the worst ocean on the globe. The weather systems, with winds of up to 200 miles per hour that howl up from Antarctica, are one reason it is so treacherous. The other reason is geography. Unlike the other continents, Antarctica is completely surrounded by ocean, and there is no significant land to obstruct the rushing waves. Ocean rollers can travel 12,000 miles around the globe at the sixtieth parallel and never bump into anything. The spinning of the earth causes these mighty waves to spiral endlessly to the east, building momentum as they go. They squeeze through Drake's Passage, the gap between the tip of South America and the end of the Antarctic Peninsula, a distance of only 620 miles. This bottleneck compacts the waves and gives them even more force. They can reach 100 feet in height from the bottom of the trough to the crest, and the distance from one wave to the next can measure a mile. They are huge walls of water bearing down on everything in their path at speeds of up to fifty miles an hour. When Sir Francis Drake first navigated through this perilous strait in 1578, it took him sixteen days and cost him four of his ships.

In addition to these waves, known as Cape Horn Rollers, the Southern Ocean carries strange currents that often run against the prevailing winds, causing a broken, turbulent surface and stirring up storms, forcing the waves to mount even higher. Giant "rogue waves" can overtake and reinforce each other, and often come in groups of three. The ancient mariners gave them the superstitious name of "Three Sisters Waves." The tiny outcroppings of rocks and lonesome islets in the extreme south are littered with the wreckage of dead ships. A calm day on the Southern Ocean has swells of fifteen feet.

In the winter the frigid air that flows north from the Pole creates one cyclone after another and collides with warmer air from the tropics, spinning off gales, hurricanes, and blizzards. Spindrift whipping off the crests of breaking waves freezes into sleet. Water is hurled up into the sky and dashed back again. Winds scream over the waves. The sun retreats in horror.

That is the Southern Ocean in winter.

The three boats of the Imperial Trans-Antarctic Expedition ran from the force of the Southern Ocean back into the pack. After scouting around, the men landed the boats on a remnant of a tabular iceberg—a large, flat, blue ice cube that rose about twenty feet from the surface of the water. At the lowest point, the berg was only five feet above the surface. The crew chucked the stores and equipment up, climbed up onto the ice, and hauled the boats after them. Everything in the boats had been soaked with flying spray and breaking waves, but they pitched their camp and crawled into their damp sleeping bags, nursing their blistered and frostbitten hands. They hadn't slept in thirty-six hours.

As they slept, the gale increased, battering other floes against their berg and chipping away at its edges. When they awoke on April 11, their hearts sank. They were caught like rats in a trap. From one horizon to the other, the loose pack had closed in around their camp. Massive thirty-foot ocean rollers from the northwest spooled through the pack, lifting the ice and letting it fall again at half-mile intervals.

"It was as magnificent and beautiful a sight as I have ever seen," Worsley said later. "But it was a sight we did not like, for the floes were thudding against our floeberg with increasing violence. Our temporary home was being swept away at an unpleasantly rapid rate."

The men could only watch helplessly as the mighty waves jostled the ice together. Launching the boats now would be suicidal, but chances were they were about to be pitched into the water at any moment. Huge chunks of ice were breaking away from their berg all the time. Shackleton, Wild, and Worsley kept a lookout from the highest point on their berg, a twenty-foot-tall knoll. All morning they scanned the ocean around them, searching for open water as their floe was whittled down to the size of a tennis court. One lead after another passed them by too far away to reach. But then, two hours after noon, a good open lead reached them, just as their berg began rolling to the side.

"Launch the boats," Shackleton called out. "Chuck in the stores any old way!"

Within minutes they were under way again, dodging their way through the sea of ice. For two hours they made steady progress at the oars, and then Shackleton judged the way clear enough to hoist sail. Immediately, the *James*

Caird sprang ahead, with the *Dudley Docker* nipping along in its wake, but the *Stancomb Wills* fell farther and farther astern. Shackleton, in the *Caird,* grew increasingly anxious as the third boat fell behind. Finally, he drew up in the lee of a large berg and shouted to Worsley to go back and help the other boat. Worsley brought the *Docker* around, and beat back into the wind to take the *Wills* in tow.

Night was falling quickly, but no one wanted to risk another close call like the one they'd had that morning. They sailed into the shelter of a large floe and moored to it. Green climbed up onto the ice and got the stove going to boil up some milk, while several men in the boats mooed like impatient calves. Soon they all held steaming mugs of hot milk, and Green and the blubber stove were brought back on board.

But no sooner had they warmed themselves with the milk then the wind shifted and brought dangerous chunks of ice crowding and bumping up against their floe. The men poled the chunks away with their oars as well as they could, but the danger of being "holed" by ice was too great. With towropes joining the three boats together, they cast off and rowed wearily from one floe to another throughout the night, trying to find some shelter. As the temperature sank below zero, the men took turns at the oars to keep warm. Rain turned to snow showers. It was a very long night.

When the morning came, a northwest breeze brought warmer air, raising the temperature almost up to the freezing point, but with rain and sleet falling, the men were still covered in ice. At noon the sky was clear enough for Worsley to take a sight. Braced against the mast of the *Docker,* he aligned his sextant with the horizon and "shot" the sun. The crew waited anxiously as he worked his calculations. He checked his figures, frowning, and checked them again. He looked up, crestfallen.

"What have we made, Skipper?" Shackleton called from the *James Caird* as he brought the boat alongside the *Docker* and jumped aboard.

Worsley spoke low, so only the Boss could hear. "Thirty miles astern, sir." A current had driven them backward, in spite of all their efforts. They were farther from their destination than when they had launched the boats at Patience Camp.

Shackleton decided not to tell the men how bad it was. "We haven't done as well as we expected," he told the crew.

With dark looks at Worsley, as though they held the navigator responsible, the men brought the boats into the wind again and continued sailing. What else could they do?

That night again they tried to take shelter in the boats in the lee of a large ice floe, but within hours of mooring themselves, the wind changed direction and began battering them against their shelter. The boats cracked loudly against the ice, grating and scraping on the edge of the floe. Shouting over the wind, the men fought their way off and into the open water again, where a heavy, wet snow began falling on them. Around them the sea was stiffening as it froze, and the men could hear the snow crackle as it fell onto the waves. The new sea ice hissed and creaked as it rose on the swell. For the rest of the night, the men sat in the boats, their clothes freezing on them, huddling together for warmth. It was too cold for sleep.

When the light dawned in the morning, they were like a company of ghosts, their faces drained and pale with strain, their beards and hair white with snow and salt spray. Shackleton ordered the sails raised and led the way through the loose pack and pancake ice again. Late in the morning they passed a stretch of ice where thousands of fish had been killed by a cold current. Now fulmars and petrels swooped down and bore them away.

The frigid wind from the Pole increased steadily, driving them northward until, almost without warning, they burst free from the pack and into the open ocean again. Huge ocean rollers swept toward them, and the three boats began clawing up waves whose faces were a quarter of a mile long. The gale force wind tore the crests from the rollers, covering the men and boats with a layer of ice. Before them was the Southern Ocean, and they were making for an island only twenty miles long and 100 miles away. The men prayed that Worsley's calculations were right. They were looking for a needle in a haystack. Beyond Elephant Island lay the 600 miles of Drake's Passage, with no landfall before South America.

Waves broke over the bows of the boats, washing over the exhausted men. Now they had a new agony—a gagging, unbearable thirst. They had left the

pack so suddenly that they had not had time to take ice on board for melting into water. Constantly drenched in salt water, the men began to dehydrate. Even without drinking, they had to urinate frequently because of the water absorbed through their skin. They were also tormented by diarrhea from the uncooked meat they had been forced to eat. The only way to relieve themselves was by hanging over the side of the boat as ice seas surged up against them. Shackleton suggested that all hands eat as much as they could in compensation, but few of them could manage to choke down uncooked seal meat or dry sugar cubes, and some were too seasick even to try.

Of the three boats, the *Stancomb Wills* was in the worst fix. It was the smallest, and the least seaworthy. Hudson, who had the tiller, was on the point of breaking. Shackleton and Worsley were terrified that the *Wills* would be lost in the night if they didn't tether it to their boats. As darkness fell on the ocean, the three boats tied themselves together, and the *Docker* put out a sea anchor to keep them turned up into the wind. They had to wait out another night without sleep.

The temperature dropped and the wind kept up, sluicing water over their bows. The men's feet were swamped with cold water. As they began to lose feeling, they started wiggling their toes inside their waterlogged boots to keep the blood circulating. With every movement the men made, ice crackled off their clothing. Some of the men began to cry in their despair; some shouted curses to the wind through cracked and frostbitten lips. The fear of killer whales tangling in their lines began to prey on some of the men's minds, and all of them could feel the motion of the boats growing clumsier and heavier as ice built up on them. They were shipping water constantly. The men took turns hacking ice off the thwarts and bows, and bailing to keep the small boats from foundering.

Gradually, in the small hours of the morning, the wind stopped flaying them and began to taper off. When the sun finally rose in a brilliant pink sky, it shone on twenty-eight men who were more dead than alive. Saltwater boils on their faces were breaking open and dripping across the dead-white rings of frostbite. Their eyes were sunken and red, and they had the wild look of men driven to the end of their ropes by pain and exposure. But dead ahead, not more than thirty miles away, rose the snow-covered basalt peaks of Elephant Island. Some

of the men laughed, nearly hysterical. In a cracked voice, the Boss ordered the sea anchor brought in. By the impossibly beautiful light of the sunrise, he looked like an old man. Worsley noted it with shock. Somehow, Shackleton had always seemed invincible, but even the Boss had been beaten hard by the terrible night.

With luck, however, they would be on land by the next nightfall. A steady breeze filled their sails, but to the men, it didn't drive them fast enough. They shoved their oars into the water again and, with land in sight, found strength they didn't know they had. Some of them chewed raw seal meat to swallow the blood and ease their parched throats. Most of them had not slept in more than three days, but they could see the end of their ordeal over the breaking waves. The *James Caird* still towed the clumsy *Wills* for safety, and the *Docker* dragged itself forward in the lead.

Blackborrow had lost all feeling in his feet. There was almost nothing anyone could do for him, but Dr. McIlroy massaged the young man's feet, trying to restore the circulation. Greenstreet and Macklin also took off their boots and found their feet frostbitten, but they rubbed their toes until they felt the searing pain of blood flowing through their veins.

Steadily, throughout the day, the three boats drew nearer and nearer to Elephant Island. By two in the afternoon they were less than ten miles away. But at three o'clock they hadn't gotten any closer. They were in the grip of a current that held them off the island. To make matters worse, the wind shifted around and began holding them off as well. The sails were lowered hastily, and the men redoubled their efforts at the oars. It was too cruel to believe, but they could not get closer to the island.

As darkness began to fall at five thirty, the wind shifted once again and quickly blew up into a gale, tearing the tops off the waves. Worsley shouted to Shackleton that their best hope now lay in separating; he was having trouble keeping the nimble *Dudley Docker* back with the other two boats. Reluctantly, Shackleton agreed, although he refused to release the tether that kept the *Wills* with the *Caird*. He was sure that if he let the smaller boat go, it would never be seen again. The wind ripped clouds across the face of the moon. By the faint light, Worsley steered the *Docker* toward Elephant Island and was soon lost to sight.

It was night, and they were still in the boats. The men were sick with disappointment. Some of them lay senseless and numb, on the brink of losing their minds. Shackleton feared that some of the men would die if they didn't make landfall soon. Once during the night he called out in the darkness to the *Wills*.

"Blackborrow!"

"Here, sir," came a weak reply.

"We shall be on Elephant Island tomorrow," the Boss shouted. "No one has ever landed there before, and you will be the first ashore."

Blackborrow did not answer. He had long since lost all feeling in his feet, and doubted he would land anywhere, first or last.

On the *Docker*, the men were clawing their way toward the island in heavy seas. The boat pitched and rolled wildly as waves smashed into it broadside. Worsley had only one compass left, and he lighted a match to check that they were still headed in the right direction: the island itself was lost in the darkness. Cheetham had been smoking, but his pipe had gone out, and he begged a match from Worsley to relight it. The other men let out a storm of protest at using up their precious matches.

"Look here, I'll sell you one," Worsley said.

"Right, sir. What price?" the third officer asked.

With a hoarse laugh, Worsley replied, "A bottle of champagne."

"Done, sir. As soon as I get back to Hull and open my little pub, the champagne's yours."

They sat through the rest of the night, bailing, rowing, and cursing. Worsley, who had been at the tiller for more than fifty hours, finally pitched forward in a dead faint. Greenstreet took the tiller and prayed he would stay on the right course. When the morning dawned, foggy and squally, they were right up under the island's towering black cliffs, and a violent squall tore down the side of a mountain, slamming into the boat.

"Wake Worsley!" Greenstreet cried.

The men tried to rouse the skipper, calling and shaking him, but he seemed to be dead. McLeod gave Worsley a couple of hard kicks to the head. Instantly, Worsley sat up and croaked, "Keep her away four points." Waves thundered against the rocks, throwing spray into the air and falling back with a hiss.

Worsley steered the boat westward, searching for a landing site. Dominican gulls sailed up the black peaks, disappearing into the fog. By nine thirty the crew of the *Docker* still hadn't found a beach, and there was no sight of the other two boats.

"Poor blighters," Greenstreet whispered, sure the *Caird* and the *Wills* were lost at sea. "They're gone."

Then they rounded a spit, and ahead of them were the other boats, standing off in the surf where a reef sent breakers crashing up into the air. A narrow tongue of land made a landing beach at the base of the cliffs. The feeble shouts of the men on the *Docker* were lost in the pounding of the waves. Shackleton waited for an opening in the surf and then gave a shout for the men to pull with their last strength through the reef. Shingle scraped beneath the bow as the boat ground up onto the shore.

"Jump ashore, Blackborrow," Shackleton urged, determined to give his youngest crewman the honor of first landing.

Blackborrow didn't move. Impatient, Shackleton reached out and dragged the boy up by his arms and hoisted him over the side. Blackborrow fell to his hands and knees, and a breaking wave toppled him over.

"Get up," Shackleton ordered.

"I can't, sir," the boy replied.

In a flood of shame, Shackleton remembered that Blackborrow's feet were frozen. He motioned How and Bakewell over the side to help the young man onto shore. One by one the boats surged up onto the rocky beach, and the crew stumbled through the water, on solid ground for the first time in sixteen months. Wild stepped out of the *Caird* beside Shackleton "as easy and unconcerned as if he had stepped out of his car for a stroll in the park," the Boss recalled later. But most of the men were not as calm as Wild. Many of them began weeping and laughing at the same time, falling to their hands and knees to pick up black pebbles and let them trickle through their hands.

They had landed.

DRY LAND

Elephant Island had been named years earlier for the throngs of elephant seals that crowded its rocky shores. Seals and birds were its only residents. Only twenty miles long and thirteen miles wide, it lies at the farthest tip of the Antarctic Peninsula. Beyond it stretches Drake's Passage. By navigating there through fog, snow, and winter seas, Worsley had found the needle in the haystack.

True to its name, the island presented them with an elephant seal on landing. Almost immediately, the animal was converted into food. Green began cooking again, although without his usual smile. For the first several hours on land, the men ate, slept, and ate again, standing around in small groups, stupefied and silent. From a penguin colony nearby, gentoos waddled down the beach to stare at their visitors.

Shackleton and Worsley walked some distance along the beach, sizing up their location. It was a desolate spot. "Thank God I haven't killed one of my men," the Boss said. "I knew that one more night of exposure would do for some of them." They walked in silence for a few moments, their feet crunching in the loose rocks, and then Shackleton added, "What do you think of this place, Skipper?"

"Any solid land is a godsend when we are so badly in need of rest and food," Worsley admitted. "But I've looked round a bit and—well, it's not much like the Riviera."

It was quite an understatement. Grim black cliffs reached up 800 feet into the fog at their backs, and the 2,500-foot peaks behind those were covered with glaciers and snow. Cormorants, skuas, and Cape pigeons wheeled in and out of the mist. Patches of orange lichen made the only bright color, and a high-water mark on the cliff walls showed that their landing site was not at all safe. Storm tides would frequently submerge their spit of land when the weather turned ugly. They would have to find a better beach before deciding what to do next.

But before anything could be done, the men needed to rest. Through the

remainder of the day and night, they slept and ate, keeping the fire going in the stove with the blubber from four more seals they slaughtered on the beach. Shackleton let the crew sleep until nine thirty the next morning. Then he told them the news. They would soon have get back in the boats and move.

At eleven, Frank Wild and five men pushed the *Wills* out into the crashing surf and rowed off in search of a new landing site. A couple of miles offshore, a belt of pack ice and eroded bergs was drifting past, warning everyone of the winter to come. Meanwhile, the men continued to eat and rest, enjoying the feel of solid ground under their feet, stretching their cramped limbs, melting glacier ice into drinking water. They moved the stores and tents as high up the spit as possible and waited for Wild's party to return.

Darkness had fallen by the time the *Wills* ground onto the shingle beach again. Tired and hungry, Wild devoured a seal steak as he described their nine hours of searching the coastline. The only suitable place they had found was seven miles to the west. It was another narrow spit of land, with a penguin rookery and a glacier nosing down the mountainside nearby. The Boss decided they should set out at dawn.

At five o'clock the next morning, with the stores loaded onto the boats, the men pushed off into the water again, rowing along the base of the cliffs. Within two hours the winds picked up, quickly blowing into hurricane force, crashing waves against the rocks and hurling spray over the men in the boats, where it froze into slush. They struggled forward against a hard current, sometimes seeming to stand still despite their straining at the oars. The boats rolled and pitched in the violent, sucking backwash from the cliffs. Somehow, Greenstreet had lost his mittens, and the blisters on his hands froze like pebbles under the skin. Macklin, too, lost a mitten, and his hand turned white with frostbite on his oar. For hours they battled their way westward in a blizzard. By three o'clock the beach was in sight, and with a last effort they dragged themselves through the breakers and hauled the boats out of reach of the waves. Some of the men immediately killed a seal that was resting on the rocks, and Greenstreet staggered toward it and thrust his frozen hands into the bloody, steaming carcass.

The beaten men stumbled on numb feet to examine their new campsite. It