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The canine explorers – the sled dogs who helped Roald Amundsen reach the South Pole

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ABSTRACT

One hundred Greenland dogs were purchased by Roald Amundsen from the Royal Greenland Trading Company in September 1909 ostensibly for a North Pole expedition, but secretly to use to reach the South Pole. Amundsen considered the dogs "equipment". He was a complicated character in a very different time. And he compulsively pursued his mission. His actions perhaps are seen differently from the 21st century perspective and in light of our evolving attitude toward animals, especially dogs. This paper presents the facts of what happened concerning the sled dogs, using Amundsen's own statements in his books, diaries, and letters, as well as the expedition members' journal entries and personal letters. It focuses on the dogs who made Amundsen's exploration possible, and who helped humankind discover the final undiscovered part of our world.

Amundsen began his Norwegian expedition with 97 sturdy canine souls, who were taken on board the Fram near the coast of Kristiansand in August 1910. Through births and deaths on the ship during their five-month journey south, the dogs' number swelled to 116 upon arrival in Antarctica. Adults and puppies alike withstood the roller-coaster ride of the Fram on the ocean waters, the heat of the tropics near the equator, and the freezing winter of Antarctica. Taking into account the birth of puppies on the ship and at their Antarctic home Framheim, the actual number of dogs involved in this significant moment in history doubles to over two hundred. But, after initially nurturing and protecting the dogs, Amundsen proceeded to cull them throughout the expedition, slaughtering those he deemed unnecessary or weak, and destroying those who had served their purpose. Amundsen began his South Pole trek in October 1911 with 52 brave canines, and returned with 11, as a result of unnatural, forced attrition. The dogs were nearly starved; at times when they were fed, it was the flesh of their fallen comrades they were given to line their empty stomachs. And yet the dogs all performed their roles brilliantly, even when death was their reward. The sled dogs were the heart and power of the South Pole expedition. The intent of this article is to shine a light on the dogs' population, accomplishments, and sacrifices, and to give them their due recognition and place in history.

Keywords

Sled dogs, sledge dogs, Roald Amundsen, South Pole, Antarctica

Introduction

The sledge dogs are the unsung heroes of Roald Amundsen's South Pole expedition. They, as Amundsen himself stated, were the key to his success and to the achievements of the Norwegian Antarctic Expedition of 1910-1912 (Amundsen 1912). Without these canine explorers, Amundsen probably would not have reached the South Pole prior to Robert Falcon Scott – perhaps he would not have reached the Pole at all.

Amundsen charged his men with making the dogs their priority, as the fate of the entire expedition rested on their canine shoulders (Amundsen 1912; Johansen 2011; Gjertsen 2011). He professed supreme knowledge of the Polar dog. And he praised the dogs as the best means of transportation (Amundsen 1912). But Amundsen did not always understand or handle his dogs well. Indeed, many times the dogs were quite misunderstood by the great explorer. The sometimes questionable and many times ruthless treatment extended from the ship's voyage to the work in Antarctica. At one point he carried out a mass killing of 24 dogs who had helped bring him to the Polar plateau – a truly astounding feat for which they received no other acknowledgement but a pull of the trigger. As the Pole grew ever nearer, with the dogs diligently pulling the men toward their goal, Amundsen destroyed the loyal animals who had brought him there.

Although it is generally understood that the dogs were the one significant point of difference between the Norwegian expedition and the English expedition, precious few writings have focused on the dogs themselves – just how crucial they were to Amundsen's progress, how extensive and intricate their canine community was within the expedition, and how deeply they were penalized for being in the unfortunate position of existing as Polar dogs during the early twentieth century. The contention that most of them were killed out of necessity is not accurate. Moreover, their loyalty, courage, and endurance in the face of the harshest conditions dealt by nature – and the harshest treatment dealt by humans – have not been thoroughly documented and analyzed before now.

This article is intended to shine a light on the dogs, to present a comprehensive record of their population, and to offer accurate information in the face of some of the myths. It highlights some of the lesser-known facts, some of the individual dogs, their feats that enabled the humans to reach their goal, and their relationships with one another, with Amundsen, and with the expedition members. It is based on information featured in the author's book The Sled Dogs Chronicles, which names, tracks, identifies, and documents all 116 dogs using the expedition members' diaries and documents, and provides their detailed biographical information. The source material used includes all the crew's journals, relevant personal letters, business correspondence, ship's logs, and expedition reports. Here we take a closer look at the dogs who made Amundsen's attainment of the South Pole possible, and give credit to their sacrifices and their achievements.

Good Greenland dogs

When cool, methodical Roald Amundsen impulsively turned the world upside down, deciding to secretly sail to Antarctica in quest of the South Pole whilst all the world thought he was heading to the North Pole, he knew he had to have dogs to help him successfully carry out his plan. And so

in September of 1909, one day after making his decision, Amundsen was en route to Copenhagen, Denmark to purchase the best dogs possible for his expedition. He acquired them from the very reliable and reputable Royal Greenland Trading Company, represented by its equally respected Inspector Jens Daugaard-Jensen (Amundsen 1912). Obtaining dogs was the primary issue for Amundsen, for in this crucial journey to the south, there was no greater advantage, nor any more important factor, than the speed, ease, and trustworthiness of good Greenland dogs.

While 100 is the number normally associated with the Amundsen expedition, originally Amundsen had ordered only 50 dogs from the Greenland Inspector, but quickly doubled that amount to 100 (J. Daugaard-Jensen, personal communication, 17 September 1909). His decision was probably an effort to increase his chances for victory – to establish a system of built-in redundancy wherein a backup element would replace a working element in the event of the latter's demise or malfunction. Here Amundsen's magic number of 100 dogs provided a security blanket – a skilled labour pool, a trained understudy dog standing in the wings for each active dog. This redundancy was instrumental to Amundsen's method, and its brutal effectiveness was seen later during the preparations and the actual trek to the South Pole.

Sex, secrets, and kibbles

To the Greenland Trading Company, Amundsen's endeavour was still a planned excursion to the North Pole. The true destination of the Norwegian expedition – the South Pole – was known only to Amundsen and his brother Leon at this time. It was a fine balancing act for Amundsen to make the necessary preparations for a real expedition under the guise of an imaginary one. For his part, the good Inspector Daugaard-Jensen was very polite and accommodating, precisely listing the descriptions, ages, sexes, costs, and qualities of the dogs, and itemizing the proportionate number of harnesses, whips, and food necessary (J. Daugaard-Jensen, personal communication, 17 September 1909).

The dogs would all be two to three years of age; they would come from the west coast of Greenland, from the three districts of "Egedesminde, Govhavn, and Jakobshavn" (Aasiaat, Godhavn, and Jakobshavn Glacier); and they would be hand selected by the Inspector himself, who promised he would purchase only "good, big animals" and would choose the very best (J. Daugaard-Jensen, personal communication, 17 September 1909). Five of the original 50, and later 10 of the amended order for 100 dogs, would be female – indicating a ten-percent rate for breeding. The price for the dogs was 12 kroner for each male and 10 kroner for each female. Evidently a lower value was placed on working dogs who could also give life to additional working dogs.

Food was a concern – 10 tons of "lodde" fish was a large order to catch and dry by June of the following year (J. Daugaard-Jensen, personal communication, 14 September 1909). And so the inspector suggested preparing the fish as a paste, mixed with fat. This is indeed what Amundsen ultimately did, providing fish pemmican (dried fish with lard, dried milk, and middlings) and daenge (a fish-and-butter mixture) as well as dried fish and meat pemmican for the dogs (Amundsen 1912).

By the end of September, Amundsen was given official approval to bring the dogs from Greenland

to Norway. He received a confirmation that they would be shipped the following June-July with the steamer Hans Egede to be put on shore near Kristiansand (C. Ryberg, personal communication, 20 September1909). But negotiations continued for another three months. Finally, on 30 December, an official letter from the Inspector confirmed the costs and purchase of the dogs Amundsen so ardently needed (J. Daugaard-Jensen, personal communication, 30 December 1909). On the last page of this letter, at the very bottom, underneath Daugaard-Jensen's flourished signature, Amundsen added an urgent note, scrawled in large handwriting across the full width of the page: "Naar kommer Hundene?" – "When are the dogs coming?" He was impatient, as he had placed a priority on the dogs and was quite desperate to know when his 100 good Greenland dogs would arrive – the dogs who would take him to the South Pole and to that place in history which he so fervently sought.

Two "Eskimos" to care for his dogs

It is known that Amundsen professed an intimate knowledge of working with Polar dogs, and included in his crew two members who were expert dog-drivers with previous experience in sledging expeditions – Sverre Hassel and Helmer Hanssen. But a less-publicized fact is that, initially, the great explorer and reputed dog expert had attempted to hire two young Inuit males from Greenland to care for his 100 dogs during the voyage from Norway to Antarctica, and possibly during the South Pole expedition itself. The fact comes to light in a series of letters between Amundsen and the Greenland Trading inspector, sent once the purchase of the dogs had been secured. Amundsen first broached the subject in a letter dated 7 February 1910, in which he mentioned in passing a request for two "Eskimos" from Greenland to be provided as part of his expedition (R. Amundsen, personal communication, 7 February 1910). This new inquiry for two people to be brought with the dogs unleashed a whole new series of letters, requirements, and complications that Amundsen probably did not foresee, and that brought new headaches to Daugaard-Jensen. The inspector questioned Amundsen regarding the length of time for the expedition and how these two people would be returned home (J. Daugaard-Jensen, personal communcation, 10 February 1910). Amundsen's reply was not very specific. Regarding the route, he said the plans were to sail around South America, up to San Francisco, and across the Bering Strait, then to the Polar Ocean – but he did not mention anything about stopping in Antarctica (R. Amundsen, personal communication, 12 February 1910). After further questioning by Daugaard-Jensen (J. Daugaard-Jensen, personal communication, 15 February, 1910), Amundsen finally replied forthrightly: "The main purpose for me is to have people who are fully accustomed to dogs during the first part of the trip round to San Francisco. I'm willing to arrange for them to come back home safely from San Francisco" (R. Amundsen, personal communication, 17 February 1910). It was important for him that there be two Greenland individuals to take care of the dogs, and that they be "in their best age" (R. Amundsen, personal communication, 25 February 1910).

So here we gain the full measure of Amundsen's priority and concern for this expedition: first and foremost he wanted the dogs to be well taken care of – and perhaps trained – by those who were most knowledgeable and experienced with sled dogs – the Inuit.

The request, however, brings into question Amundsen's own confidence about transporting the dogs from north to south. Perhaps he was not so certain that he would be able to keep the dogs healthy

and alive as they crossed the equator. And perhaps he suspected that he would need help handling his dog team once in Antarctica.

His request also meant bending or withholding the truth about the two dog handlers' true destination and duration of employment.

Amundsen did receive an approval from Daugaard-Jensen, who asked the explorer to send an official request to the Department of Foreign Affairs (J. Daugaard-Jensen, personal communication, 6 March 1910). To this Amundsen replied that he would write to the official government in Greenland and that he was "grateful to read that you are going to get me skilled people" (R. Amundsen, personal communication, 9 March 1910).

He ultimately abandoned the request, no doubt realizing that there was too much government scrutiny involved, which he was not prepared to undergo.

Amundsen's attempt to secure two Inuit implies a lack of confidence in his ability to take care of his dogs during the long voyage south – and possibly even during the time on the Antarctic ice. It most definitely reflects the importance he placed on the dogs.

Dogs and puppies on the high seas

One hundred dogs were loaded onto the ship in Greenland, but three died in transit to Norway – two on the ship, and one during an attempted escape on shore – leaving 97 to board the Fram at Kristiansand in August 1910 (Amundsen 1912; Wisting 1930). They were situated along the deck and on the bridge (Fig. 1). Daugaard-Jensen had promised that 10 dogs would be female – in actuality there were 15 females on board. Despite all the dogs being chained to the deck, they went to work rather quickly. In short, they were fruitful and multiplied, to the tune of over 60 new puppies born en route to Antarctica (Author's research). But the happy events were marred by crass deeds. Many touching moments of bliss ended with a nonchalant throwing of the newborn puppies overboard. This was done whenever the puppies born were female. Woman was not welcome on board, and Amundsen reiterated this many times, quoting Fridtjof's Saga, the romantic-heroic poem by Esaias Tegner: "'Woman is protected ashore, must not come on board, was it Freia, betray you she will'. All of them end up in the sea" (Amundsen 2010: 47.) The killings began with the first births that took place on 29 August to mother Camilla (also spelled Kamilla) (Amundsen 2010). Her caretaker, veteran Arctic explorer Hjalmar Johansen, agreed with the practice, rationalizing that "there are enough bitches on board and we have enough breeding animals with those we already have," and complaining of the "terrible racket" that those who were in heat made "both day and night" (Johansen 2011: 24). But he later described the practice as merciless although he did not disagree with it (Johansen 2011). The female puppies' forced exits from life were also accompanied by disparaging remarks reflecting Amundsen's morbid humor: they were "the weaker sex" who were "offered to the albatrosses" who "certainly found the new born puppies very tasty" (Amundsen 2010: 59). In the end, only one female puppy was allowed to live aboard the Fram on the way to Antarctica (Amundsen 2010) – she was born to the last mother to have puppies on board.
In all, at least 33 female puppies were killed – thrown overboard to become fish food or bird food or

flotsam floating on the sea of life (Author's research).

All the male puppies were allowed to live, but several of them died owing to sickness, illness of the mother, or – in rare instances – being preyed upon by an adult. There was one "cannibal" on board named Jakob who helped himself to a few unsuspecting puppies on the ship (Amundsen 2010: 75).

The month of October particularly saw many births taking place among the violent swells of the sea. Hjalmar Fredrik Gjertsen, a flamboyant young first mate with a performer's sense of humor, many times described the scene as the ship dancing in the storms and the contents dancing across the deck, narrowly missing the dogs (Gjertsen 2011).

The net number of puppies added was 22 males and one female. These furry small creatures were lovingly looked after by the crew, especially by Lieutenant Thorvald Nilsen (soon-to-be captain of the Fram), who played foster parent to the young, and tended to the nursery built next to the bridge (Amundsen 2010). Many of the puppies are seen cradled in the crewmembers' arms in photographs taken on board the ship. Several of the crew's diaries express how much the puppies – and the dogs – provided important companionship and entertainment during the long lonely voyage (for example, Gjertsen 2011).

As for the adults, all but four of them survived the ship's voyage. One sweet and docile female died nursing her four puppies, one male died of sickness, and two – a female and a male – tragically died from being swept overboard. Amundsen's remorse for the latter two resulted in the crew's securing the sides of the deck so as to prevent any further accidents (Amundsen 2010).

A week before they reached Antarctica, Amundsen breathed a deep sigh of relief. He had successfully transported the dogs – without the help of the two Inuit. He positively gushed to his diary: "Now, that all danger of illness seems to be over, I must admit that our transport of these dogs over a distance of 16,000 km in all kinds of weather and practically all temperatures, is not just a complete success, but also evidence of special and thoughtful care. A reminder to the many who thought that the expedition would involve animal cruelty from first to last. Good grief! How I wish I had these sensitive people under my treatment. They are hypocrites. Good God! I can safely say that the dogs love us" (Amundsen 2010: 81).

The final number of dogs who arrived in the Antarctic was 116 (93 adults and 23 puppies), but another puppy died upon arrival, and so 115 dogs stepped foot onto the Antarctic continent in mid January-early February 1911 when the Fram anchored in the Bay of Whales (Author's research based on all diaries and R. Amundsen, report, 9 February 1911).

Working in Antarctica

After a few comic episodes wherein the dogs became acclimated to the new icy perch and their new harnesses, the dogs immediately went to work on the Antarctic continent, hauling sledge-loads of supplies from the ship to the base camp Framheim, which was built on the sea ice shelf below the Great Ice Barrier (Fig. 2). Framheim was a compound containing a pre-fabricated house with room

extensions tunneled beneath the ice, surrounded by large tents for the food, supplies, and – very importantly – spacious 16-man tents for the dogs. Nearly 90 dogs pulled 900 cases plus building supplies and equipment from the ship (Amundsen 2010).

The dogs made a successful first depot run in February, hauling food and provisions to 80º South. Four men with three sledges of six dogs each made the steep climb from the bay ice shelf to the Ice Barrier, and traveled for five days. They pulled 200 kilograms per sledge (Amundsen 2010), and Amundsen was elated with their performance. "The dogs pull wonderfully and the surface here on the barrier is ideal," he wrote in his diary. "Can't understand what the Englishmen are thinking of when they say that dogs are useless here. No better sledge animals can be found under these circumstances" (Amundsen 2010: 136.) But according to Johansen, the loose, deep snow made the going heavy for the dogs, and they all had to be beaten in order to go forward. Amundsen's team specifically showed the weakest performance, and Amundsen himself had extreme difficulty working his dogs, throwing off articles of his clothing as he became overheated (Johansen 2011). Johansen had previously professed that a good dog-driver understands the high intelligence, sense of fairness, and infinite loyalty of dogs (Johansen 2011.) Could it be that Amundsen, the Polar dog expert, was exhibiting flawed dog-driving tactics? Yet even with the experienced dog-drivers, the dogs were being whipped severely to work. Unfortunately, this would be the norm for the dogs during their time in Antarctica.

The disastrous depot tour

The first deaths on the ice occurred during the second depot tour in February-March 1911, when eight men with 42 dogs and seven sledges laid depots at 81º s and 82º s in preparation for the South Pole trek. Eight dogs died while pulling unendurably heavy weights and being driven to fatal exhaustion. Five of them were from Amundsen's team and died from mishandling and being pushed too hard and too far by Amundsen. One was from right-hand-man Oscar Wisting's team, and two from carpenter-turned-explorer Jørgen Stubberud's team (Amundsen 2010; Bjaaland 2011; Johansen 2011). Amundsen's dogs in particular died slow, painful, gruesome deaths. And his inability to handle them was witnessed and documented by some of the other men.

Johansen watched and critiqued Amundsen's team: "The Chief's dogs are the worst" (Johansen 2011: 61). Ski-champion Olav Bjaaland, whose observational skills were exceptional, wrote in his diary, "The boss and his dogs are struggling worse than bad" (Bjaaland 2011: 49). Even Amundsen admitted to his diary, "My dogs were difficult to drive forward today" (Amundsen 2010: 141). Pulling 300 kilograms per six-dog sledge (Johansen 2011) in what would average to be a frigid -40º Celsius, and encountering a gradual incline along the way, Amundsen's dogs were becoming difficult to move along. "They are fed up and it seems that they do not get enough food with their ½ kilo pemmican per day" (Amundsen 2010: 142). And yet he merely noted the deficiency in his diary and did not later increase the quantity of food for the dogs (Amundsen 2010). Bjaaland had to take onto his sledge 50 kilos of weight from Amundsen's sledge, and consequently struggled with the heavier load, noting that Amundsen could not handle his dogs even though he beat them with astounding force (Bjaaland 2011). Amundsen's cold, hungry, and sore-footed dogs were forced to march at the end of a whip, and his inability to work with them was felt by the other teams.

The journey was difficult for all the dogs, but it was Amundsen's dogs who suffered the most. One dog, Odin, was sent home with some of the men, where he died. Upon reaching the depot at 82º, Amundsen stored his sledge and divided his remaining five dogs among lead dog-driver Helmer Hanssen and Oscar Wisting. Lasse, Tor, Ola, Jens, and Rasmus rallied as best they could, but soon all but Lasse died on the return (Amundsen 2010; Bjaaland 2011, Johansen 2011). "Have now only 'Lasse' left," wrote Amundsen of his favourite dog Lassesen (Amundsen 2010: 145). But the handsome black dog had now disappeared and the men feared the worst (Johansen 2011). Fortunately for Amundsen Lasse reappeared and pulled the rest of the way home (Amundsen 1912).

Upon returning to Framheim on 22 March, Amundsen assessed the deaths of the dogs in terms of gains for the depot trip – a currency to be paid for preparation for the Pole. "The outcome of this depot tour is magnificent," he wrote in his diary. "Total weight of these depots [at 80º, 81º, and 82º] = 620 kilos. But this tour has unfortunately cost the lives of eight of our best dogs. It was probably due to the unusual cold, together with hard work. It was my team in particular that was affected. I had only 'Lasse' left when we arrived home. It cannot be denied that it is good to be home again" (Amundsen 2010: 146).

Amundsen had shown an alarming lack of ability to work with his dogs. He had relinquished his team to the two better-suited professionals who could – relatively speaking – more humanely drive his dogs. But all the dogs had suffered.

No further sledge-driving for Amundsen

The disastrous depot run caused Amundsen to lay aside his sledge and disperse his remaining dogs among the rest of the men, who would work with them on their own sledge teams. He sent Johansen to lead the third depot tour without him, while Amundsen stayed at Framheim nursing an anal sore that had bothered him during the month-long second depot tour (Amundsen 2010; Johansen 2011). Amundsen decided during the winter months that he would not drive his dogs himself to the South Pole, "as I don't dare do this myself yet", but would instead ski at the head of the caravan as forerunner (Amundsen 2010: 197). It must be that he recognized some limitations to his ability to drive the dogs, combined with the negative effects of his continued suffering from his painful ailment.

Three more dogs perished during the third depot tour. They were Johansen's dogs, and he was devastated by their loss. Two – Emil and Hellik – fell down a bottomless crevasse, and one – Cook – fell behind from a leg injury and probably froze to death (Johansen 2011). Emil and Hellik had been nursed back to health on the ship by Johansen and had been stalwart teammates. He would write of all three dogs in his diary repeatedly throughout the winter months, mourning their deaths.

Over the course of the winter at Framheim, while the house became buried under the snow, another nine adult dogs died by falling down crevasses, falling ill, or being ordered shot by Amundsen (Author's research based on all diaries).

But the winter months also saw new life on the frozen continent. Several litters of puppies were born,

totaling to over 35 newborns. Sadly, despite their tenacity and their mothers' attempts to tend to them, most succumbed to the continent's harshness, freezing to death. (Author's research). Female puppies were not welcome on land as well, and Amundsen took devilish delight in describing how he devised their demise. Six of them were intentionally fed to their mother's suitors (Amundsen 2010). Only four hearty puppies survived – they were Camilla's sons. Johansen doted on them (Johansen 2011).

The premature start

Amundsen's life was saved on 5 September 1911 when, while on a test run, the sledge dogs suddenly swerved away from the Barrier's steep edge toward which the men had been blindly driving them as they could not differentiate between the ice and the white sky. Led by Mikkel, who ran on expert dog-driver Sverre Hassel's team, all the dogs acted quickly and on their own initiative, narrowly missing a 75-foot drop despite the fact that the men were whipping them to go toward it (Amundsen 2010; Johansen 2011).

Three days later, an impatient Amundsen began his rushed false start for the Pole – the ill-fated journey which ended in a hasty retreat and resulted in injured dogs, frostbitten men, and a near death experience for Johansen and second lieutenant Kristian Prestrud, and which subsequently sowed discord among the men.

The premature start claimed the lives of a total of seven of the dogs – some were intentionally shot as nuisances, and others froze to death on the ice in the severe weather (Amundsen 2010; Hassel 2011; Johansen 2011).

Those who were killed included three of the four hearty puppies born to Camilla during the winter. These three strong puppies innocently and eagerly trailed the caravan on its journey, and were killed as a consequence. Luckily the fourth one ran home to Framheim (Johansen 2011).

Another casualty was Kaisa, a large, gregarious female dog with whom Amundsen had an especially contentious relationship. She had the temerity to come into heat during the premature start and cavorted with male dogs all night, causing Amundsen to catch nary a wink of sleep. Grumpy and furious in the morning, he had her shot, exclaiming "I think we'll have peace tonight" (Amundsen 2010: 281.) Although several of the men, including Amundsen, recorded this incident in their diaries, Amundsen did not write of it in his The South Pole book. Also not mentioned in the book is the fact that after the expedition had moved on, Kaisa's son, Kaisagutten, remained behind to lie down beside his mother's body. Bjaaland and Prestrud had to return to collect him (Amundsen 2010; Bjaaland 2011; Johansen 2011; Hassel 2011). Johansen later lamented the loss of Kaisa (Johansen 2011), and Amundsen stated that of all the dogs who had been sacrificed during the premature start, Kaisa was "The only one of these worth anything" (Amundsen 2010: 284).

The South Pole trek

Of the 103 dogs at Framheim in October 1911, 52 went on the South Pole trek. The few dogs formerly on Amundsen's team now pulled Wisting's sledge. The journey began with sudden exhaustion by some of the dogs, who were set free to follow the sledges. One of these – Neptune – remained behind and never caught up to the party – he was never seen again. Another – Peary – returned northward and was later found alive and well at the 80º depot by the Eastern Expedition of Johansen, Prestrud, and Stubberud on their way to King Edward VII Land.

After the initial stumble, all the dogs demonstrated fine form and served Amundsen well. But he immediately began discarding dogs who showed any signs of slowing. Ten dogs were killed on the way to and from the Pole because they had become sick with exhaustion, were pregnant, were female, or had just rubbed Amundsen the wrong way. Five of these were killed on the way to the Pole, and five on the return. Only one of these – Frithjof – was a mercy killing.

Forty-two dogs made the arduous climb to the Polar plateau, bringing Amundsen and his men safely to the gateway to the Pole. Tragically 24 of the dogs were slaughtered at Butcher's Shop to rid Amundsen of excess dogs once they had valiantly delivered him to the door of victory.

Four dogs ran away: Three going back to be with their fallen friend whom Amunden had ordered shot because she was in heat, and one walking away because he could take no more – it was his ultimate critique of the entire enterprise. His departure on 8 December surprised the men and upended Amundsen's plan to have 18 dogs to take him to the Pole. Consequently, 17 dogs reached the South Pole (Fig. 3). One dog was sacrificed at the very Pole itself, marking the attainment of the Pole with the loss of life. His name, Helge, was written by Amundsen in his diary on the same page upon which the explorer announced reaching his goal (Amundsen 1910-1912, 15 December 1911). Sixteen dogs, then, departed from the South Pole. Frithjof's mercy killing took place during the return – the men were forced to euthanise him as his lungs had ceased to work. This altered Amundsen's plan to return home with 12 dogs. And so 11 dogs ultimately returned from the South Pole journey (Amundsen 2010; Bjaaland 2011; Hassel 2011; Wisting 2011; Johansen 2011).

The ethics of the killings

Amundsen planned the South Pole journey to the nth degree. Early on he had pre-ordained the fate of the dogs. And yet he professed his initial discomfort in his diary during the winter prior to the South Pole trek: "Faithful they are indeed, faithful to death. It often cuts me to the heart when I think that these our faithful companions, our so very dear friends, will all probably be paid for their faithful service with death. Luckily, it is unlikely our feelings will be quite so tender when we will have done more of our journey" (Amundsen 2010: 229). Amundsen steeled himself against sentiment; he was counting on the dogs' loyalty to see him through to his goal, and he knew that it in turn would bring them to their end.

In his book The South Pole, Amundsen states that the decision to kill all but 12 of the dogs was made collectively by the men on the eve of the ascension to the Polar plateau, which, according to the diaries, was 17 November (Amundsen 1912). But in actuality, Amundsen had already made

this decision as early as 10 November, on which date the men laid a depot containing enough food for only 12 dogs on the return trip (Amundsen 2010; Bjaaland 2011; Wisting 2011; Amundsen 1912). Even earlier, on 6 November, Amundsen, Hassel, and Bjaaland all reported that there was not enough food for the dogs past 86º (Amundsen 2010; Bjaaland 2011), with Hassel specifying that at that point they would "slaughter the poorest dogs, so that one starts from there with 12 dogs" (Hassel 2011: 131).

On 17 November 1911, a substantial quantity of food was deposited at the main depot at 85.5º, and more would be stored at each degree thereafter. Amundsen had computed the distance and orchestrated the numbers so that the dog food carried on the sledges was only enough to keep all the dogs alive through the steep climb up the mountain (Amundsen 2010.)

The dogs began their most difficult work on 18 November, exceeding Amundsen's expectations (Amundsen 2010). They drove for 3.5 hours before being double-teamed to pull the sledges up the steep, rough incline (Hassel 2011). And in one day they climbed 5,900 feet, according to Wisting, who marveled "it is just about incredible that a few dogs can manage to pull so much" (Wisting 2011: 140).

Amundsen writes in his book that on the night before the final leg of the climb, he took great satisfaction in knowing that the dogs had brought him to this vaulted point six days prior to schedule, and that on the next day, upon reaching the summit, he would be able to slaughter the unnecessary animals early and so enjoy for himself "fresh dog cutlets" which made the men's "mouths water" (Amundsen 2002: 219). But no such gaiety and mouthwatering anticipation is recorded in the expedition diaries – only admiration for what the dogs had accomplished. Was a cooked dog steak really foremost in the men's minds on this night, as Amundsen claims?

On 21 November the dogs made the climb of their lives, lying flat on their bellies as they clawed the steep ice to bring the men up to nearly 11,000 feet. It was as if they had sensed the importance of this endeavour to the men, and had made it happen (Amundsen 1912).

"So we succeeded in finding our way forward," wrote Amundsen in his diary that night. "We are now lying on the plateau at 10,600 ft. It has been a really strenuous day, mostly for the dogs. But they have also, 24 of our best comrades, been given the best reward: death. On arriving at 8 pm, they were shot and their intestines removed. They will be skinned tomorrow. We now have 18 of the best left. These we share between three teams, six in each. It was wonderful work the dogs performed today. 17 km with a climb of 5,000 ft. Come and say that dogs are useless here. In four days we have come from the coast to the plateau 44 km, 10,600 ft. It is marvelous work" (Amundsen 2010: 304). Amundsen admitted their worth and sacrifice, but had no qualms about killing them.

The only expedition member to express remorse in his diary was Hassel, saying he had "undertook the sad and unpleasant shooting" of some of the dogs (Hassel 2011: 135). Wisting was looking at the bright side of things – that these slaughtered dogs would provide much needed nourishment for the remaining dogs: "they will be fed to the others and then we will have a soup of them" (Wisting 2011: 141).

The meat of the matter

The dog meat that was fed to the men was only for a change of diet, and for variety, as the men had full provisions on the sledges, including pemmican for protein. Wisting wrote of the butchered dogs: "we have free dog food, we feed them [the 18 surviving dogs] dog meat only now and eat it ourselves as well. We do not need to do this as we have more food than we are able to eat on this trip, but we do it for the sake of health and because it tastes good" (Wisting 2011: 142).

Amundsen turned to meat in times of relief following severe anxiety. Immediately after completing the Northwest Passage he had wolfed down raw meat which he grabbed in handfuls and pulled off the rigging of the Gjoa (Amundsen 2008). On the Belgica expedition, during the nightmarish dark and madness-filled months in Antarctica, he and Dr. Frederick Cook had maintained their health and sanity by eating seal and penguin meat (Amundsen 2008). So here, too, in the South Pole expedition, Amundsen approached the journey with meat on his mind – he would have enough meat to stave off scurvy and to instill a sense of calmness. And hence Butcher's Shop became a crimson and white meat haven where Amundsen watched his man Wisting cook up fillets of their dead canine comrades that were displayed in rows upon rows of red raw meat spread over the pristine ice (Amundsen 1912). "We have had the most delicious dog cutlets for dinner. I ate five myself, but had to stop, as there weren't any more left" (Amundsen 2010: 305). Of the 24 dogs butchered, 10 were skinned and prepared for eating (two of which were eaten by the men) while 14 were stored in a depot, three of which were fed to the dogs on the return trip (Amundsen 2010). Eleven carcasses, then, were untouched – dogs who had been killed needlessly.

Amundsen did not flinch from telling the world about Butcher's Shop. Even when the Royal Geographical Society's esteemed secretary John Scott Keltie pleaded that Amundsen avoid mentioning anything about the butchering of the sled dogs when delivering his anticipated speech to the RGS (J.S. Keltie, personal correspondence, 7 October 1912), Leon answered that Roald "asks me to thank you for your kindness but he regrets he can make no more alterations in his lecture" (L. Amundsen, personal correspondence, 19 October 1912).

Newspaper reports following the expedition, which devoted a lot of favourable ink to the dogs, reflected the impression that the killing and eating of the dogs was necessary for the men's survival. One headline boldly proclaimed that Amundsen was "forced to kill and eat his dogs" (The New York Times 11 March 1912). Amundsen encouraged this perception. In The New York Times he is quoted as saying: "I think what touched us most keenly on the whole journey was the unavoidable killing of dogs which had shared our dangers and done such splendid work. The killing of them went to the heart of every one" (The New York Times 12 March 1912).

But Amundsen also gave the dogs their due. The Daily Chronicle quoted him as saying: "I attribute my success to my splendid comrades and to the magnificent work of the dogs, and, next to them, to our skis and to the splendid condition of the dogs on landing in the Antarctic, due mainly to the precautions taken on the Fram" (The Daily Chronicle (London) 11 March 1912). Dogs and skis, in that order, had helped Amundsen win his race. Amundsen's relief that he was able to transport the dogs safely to Antarctica – without the help of two Inuit – is quite palpable. He could now assume the position of victor.

The dogs had worked hard to bring Amundsen to the South Pole. They paid the price for his victory and for this episode of human achievement.

Their final destinations

While the 52 dogs had been on the South Pole journey, 17 dogs traveled on the Eastern Expedition to King Edward VII Land with Johansen, Prestrud, and Stubberud (Johansen 1910-1912). No dogs were harmed on that trip (Johansen 2011). Approximately 11 remained at Framheim with cook extraordinaire Adolph Lindstrøm. The remaining 22 dogs simply ran wild on the ice and became unwitting inhabitants of Antarctica. They were left behind (Amundsen 1912).

The 11 South Pole survivors, 17 Eastern Expedition veterans, and 11 Framheim residents all boarded the Fram in January 1912. And so 39 dogs left the Antarctic continent (Amundsen 1912).

Of these, 21 dogs were presented to the Douglas Mawson Australasian Antarctic Expedition upon the Fram's arrival in Hobart. They were offloaded on 13 March 1912 and taken by rowboat to the Nubeena Quarantine Station (Hassel 2011), located in windswept Taroona along the Tasmanian coast. Here the dogs waited nine months before boarding the Aurora the day after Christmas, arriving in Antarctica in January 1913 for a second tour of duty. Shortly after their arrival at Main Base in Adelie Land, 11 of the dogs regrettably were shot by Mawson's men, who were concerned about keeping the dogs over the winter. They were buried in the sea. They had come so far, only to be deemed dispensable. Ten were kept alive to spend the winter with the Aussies and their remaining three young pups, and were cared for by Cecil Madigan. Of those 10 dogs, sadly two died in Antarctica, but not before one of them had given birth to a puppy (Madigan 2012.) The eight survivors and one puppy, along with the expedition's three pups, left with the expedition back to Australia, where the newspapers reported only 11 rather than 12 dogs had arrived in February 1914 (The Mail (Adelaide, SA) 28 February 1914). There is the possibility, then, that one of the eight dogs or the puppy may have died on the ship. The dogs were housed temporarily in the Adelaide Zoological Gardens in quarantine, and most of them were adopted by the expedition members (The Register (Adelaide, SA) 2 March 1914). Two remaining dogs, however, were given by Mawson as a gift to the Zoo in April 1914, and were accepted by the Royal Zoological Society of South Australia so that the dogs would not be killed (Rix 1978; South Australian Zoological and Acclimatization Society 1915).

The 18 dogs who remained with Amundsen on the Fram in Hobart in March 1912 went on with the Norwegian expedition to Buenos Aires. They were joined by another four puppies – two male and two female – who were born to Snuppesen en route to Argentina in March/April and who were allowed to live (their four siblings were not). A total of 22 dogs arrived in Buenos Aires in May. There two of them – Uroa and Rotta – were presented as gifts to Amundsen's benefactor Don Pedro Christophersen to be kept as pets by his son Peter. These two caused such a disturbance that they were promptly given back. Peter Christophersen traded the two dynamic dogs for one of Snuppesen's puppies born on the journey to Buenos Aires. His sister Carmen took another puppy. Unfortunately these two puppies died soon after. This left 20 dogs remaining. All 20 dogs were placed in the

Buenos Aires Zoo in late May, as Amundsen wished to put them on display. There, tragically, over a few months, most of them died from a disease unknown at the time whose symptoms resemble canine distemper. The dogs probably were infected by other animals at the Zoo. It was a terrible consequence of imprisoning and placing on public exhibition these social, active beings who had crossed the oceans and bravely traversed the Antarctic continent. Only seven remained, just barely clinging to life, and they were taken back to the Fram in August by Nilsen in an effort to keep them alive. But most of them suffered greatly and either died an excruciating death or had to be shot in order to end their extreme agony. The last of them were Hai and Rap – both of whom died of physical and mental anguish in October and December respectively. Only three survivors recovered and sailed back to Norway in January/February 1913 – Obersten, Lussi, and Storm. They came home to a heroes' welcome. Obersten was exhibited by Amundsen's brother Leon on the dog show circuit and won medals and trophies. Lucy and Storm went on to take part in a heroic rescue mission that saved many human lives (Author's research and biographical compilation using original sources including: Nilsen 2011; Hassel 2011; T. Nilsen, personal communications, 8 October 1912 and 15 October 1912; C. Doxrud, personal communications, 29 August 1912 and 4 January 1913; L. Amundsen, personal communications, 6 February 1913 and 28 May 1913.)

Human-animal nature

When taking into account all the births during the ship voyages and the winter in Antarctica, the total number of dogs involved in Amundsen's South Pole expedition more than doubles to over 200. Over 100 of these dogs provided companioship, guidance, and crucial mobility to the Norwegian Antarctic expedition. The dogs who helped Amundsen gave their all – and gave their lives. These sled dogs are a significant part of our history.

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Fig. 1. *Dogs on the bridge: The dogs curl up under the pilot wheel. Note the high seas. (Photo courtesy of Nasjonalbiblioteket [National Library of Norway], Oslo, Norway.)*

Fig. 2. *A team of dogs and Helmer Hanssen go out on the Ice Barrier. Note the large whip in his hand. (Photo courtesy of Nasjonalbiblioteket [National Library of Norway], Oslo, Norway.)*

Fig. 3. *One of the sledge dog teams at the South Pole, with Oscar Wisting and loaded sledge. (Photo courtesy of Nasjonalbiblioteket [National Library of Norway], Oslo, Norway.)*

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