







# | A UNIQUE *predation*

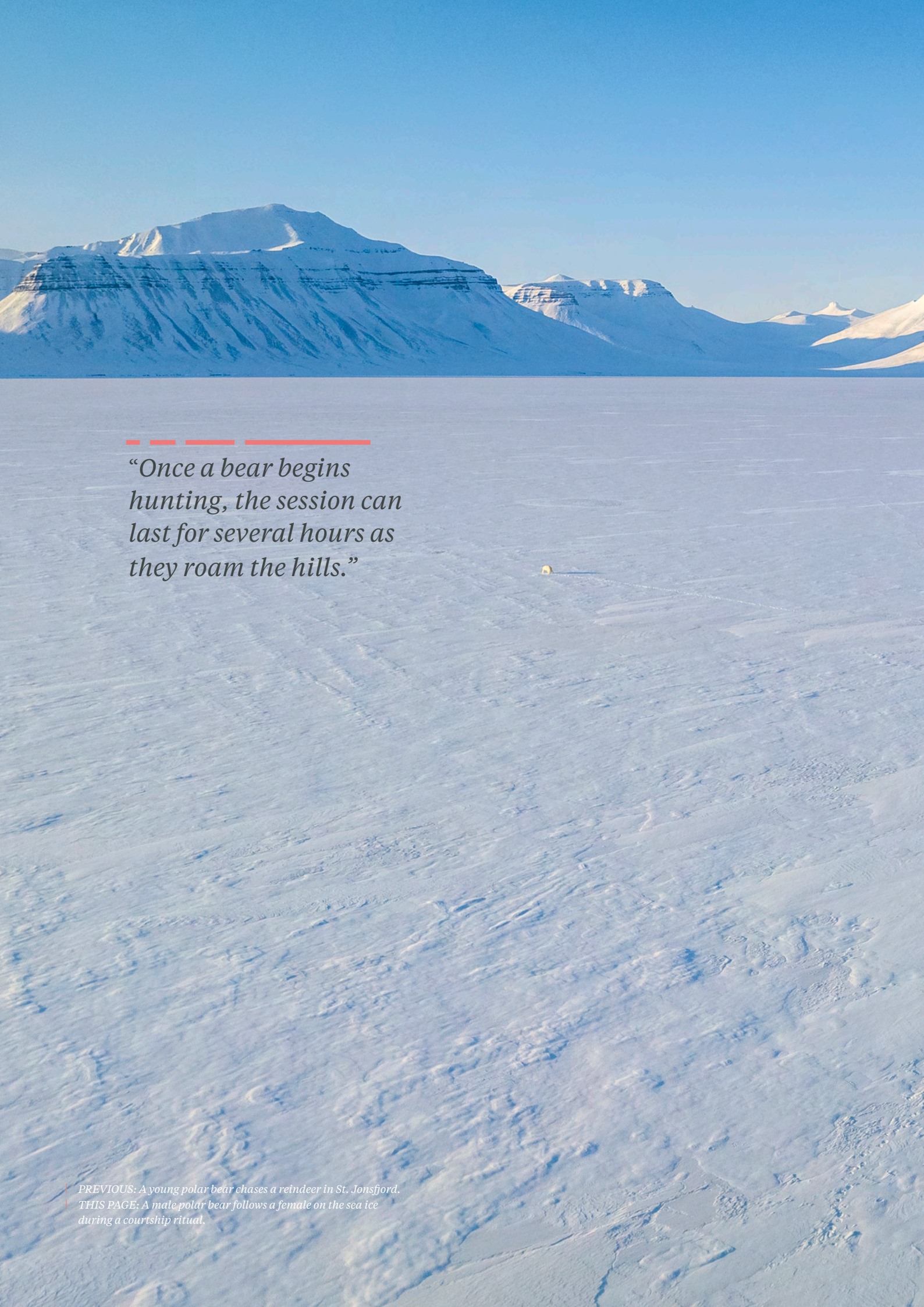
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*Wildlife photographer Florian Ledoux and his team witnessed a powerful interaction between reindeers and polar bears, two of the Arctic's iconic species, in a remarkable field observation. As the loss of sea ice continues to reshape the Arctic landscape and its ecosystems, species that historically had little interaction are now finding themselves sharing the same habitats.*

Words by Florian Ledoux and Nane Steinhoff

Photographs by Florian Ledoux





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PREVIOUS: A young polar bear chases a reindeer in St. Jonsfjord.  
THIS PAGE: A male polar bear follows a female on the sea ice  
during a courtship ritual.





Svalbard, a remote Arctic Archipelago situated halfway between mainland Norway and the North Pole, is a realm of dramatic landscapes and extreme conditions. It is a land of large barren glaciers and windblown peaks, mountain slopes, and frozen fjords at the bottom. This fragile ecosystem, shaped by ice and snow, is home to an incredible array of wildlife that has adapted to its harsh environment. Among them, the polar bear reigns as the apex predator, navigating a rapidly changing landscape that is reshaping its behaviours and survival strategies.

As we stood on the icy expanse of Svalbard in late April, the horizon stretched before us like an infinite white canvas on which the artistic winter light painted otherworldly hues of pink and blue. The sheer vastness of the landscape overwhelmed our senses. Each breath we took crystallised in the frigid air. Surrounded by a pristine wilderness, we were immersed in a symphony of silence. In this grandeur, we were humble, small observers. Yet, in this fateful night, we were about to witness an overwhelming behaviour as our team encountered several reindeer carcasses scattered along the fjord coast and its numerous side valleys.

My friend and expedition leader Oskar Strøm, spotted a female polar bear resting. It wasn't long before she was on the move again, following the coastline. Suddenly, she took the direction of the hills and tracked a group of reindeer, stalking her prey with a precision born of instinct. Once within range of the animals, and to the team's surprise, the bear relentlessly chased them, showing no signs of giving up despite the initial gap between them.



As the chase continued down into the valley, the reindeer struggled through deeper snow. One individual split off from the herd, turning right. The bear took a shorter turn to quickly close the distance. With the reindeer exhausted in the deep snow, the bear jumped upon it like a lion on its prey. The hunt was over. The bear then began pulling at the reindeer's fur while biting its neck to finish the kill. Seeing her incredible hunt unfold before our eyes was nothing short of magical, a demonstration of the sheer power and grace of this magical predator.

This eventful night was the first time such a winter hunt had been documented in this way, leaving our team in awe. But the surprise didn't end there as we soon discovered that this female polar bear was making daily kills throughout the winter, explaining the numerous carcasses we had previously encountered. We were quick to name her 'the Grinch' – a suitable name for her love for preying on reindeer.

Later that same year, I also encountered this type of hunting behaviour happening in another fjord system with other polar bears. In the same fjord system where

being 1.2 metres wide and 2 metres long, they were just big enough for two people to sleep in. Daily routines, from maintaining the pods to ensuring safety, demanded time and dedication. Living on the ice was undoubtedly hard work, but it offered unparalleled advantages and reduced travel distances, allowing us to travel longer observations. When we were too cold or tired, or a bear was sleeping, we could just rest inside the pods.

Over time, it became our home for the winter. Living in the pods transformed our approach to capturing images in these remote regions, allowing us to intimately engage with the icy expanse for several months of the year. This unique opportunity enabled us to make endless observations. Living in the 'pods' was not just a logistical choice but an intrinsic immersion that created an intimate connection with nature. After a few years of work, we have collected more than 55 waypoints of kills and gathered many pages of field observations from the team – often involving 'the Grinch', one of the most unique polar bears we have ever encountered and have been lucky to document.

Beyond her role as a predator, the Grinch became more than a polar bear; she became a friend that we could recognise by her incredible character. So, when news of her death reached our ears in early June 2023, two weeks after we last saw the 3.5-year-old bear healthy, it sent shockwaves through us, and we couldn't hold back our tears. Found lifeless, her once vibrant spirit extinguished, the circumstances surrounding the Grinch's death remain unknown. Suspensions of a bacterial or viral infection emerged with the discovery of dead Arctic foxes in her vicinity that most likely ate on the carcass. After following her journey for so long, it was truly devastating news. Grinch's story was one of resilience and success as she ventured into independence at the early age of one year and a half and thrived in hunting reindeer, maintaining a healthy and well-fed lifestyle. Her intelligence, agility, exceptional speed and endurance during pursuits set her apart, making her a truly remarkable individual. Her distinct personality, marked by a hyperactive mind and a longing for companionship, made her even more beloved.

Her spirit lives on in the observations we have made in hopes of inspiring further research into her charismatic species. One of the core observations we were able to make is that 'the Grinch' often relied on speed and endurance rather than complex stalking strategies. She sprinted at full speed, using the slopes to gain momentum and close the distance between her and the reindeer, while Svetlana and most other bears prefer to use the terrain to stay undercover and stalk their prey. Most hunts typically begin with a herd of reindeer, focusing on splitting the group before taking an individual down. Occasionally, they manage to stalk an isolated reindeer while it grazes the tundra. After the chase, the bears are often exhausted, standing near or over the reindeer, catching their breath for several minutes.

Once a bear begins hunting, the session can last for several hours as they roam the hills and repeatedly chase

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we witnessed the first predation on reindeer, we soon learned that another family with two yearling cubs – cubs that are one year or older, but still smaller than their mother – hunted reindeer too. They were the cubs of the polar bears Elsa, Svetlana and her brother that we filmed for Disney Nature's Polar Bear film when they were just four months old.

The following winters and springs, the team, intrigued by this special behaviour, decided to focus and fully commit to understanding this unique pattern. To optimise our time and filming opportunities with the polar bears, Oskar proposed a brilliant solution: two small 'pods' mounted on sledges with skis that we could easily pull behind the snowmobiles. These two compact boxes were designed to provide us with shelter and the necessities of energy, warmth, and water – 24/7. And,

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*A male polar bear rolls in the snow and stretches his leg as he lies and waits near a seal breathing hole.*





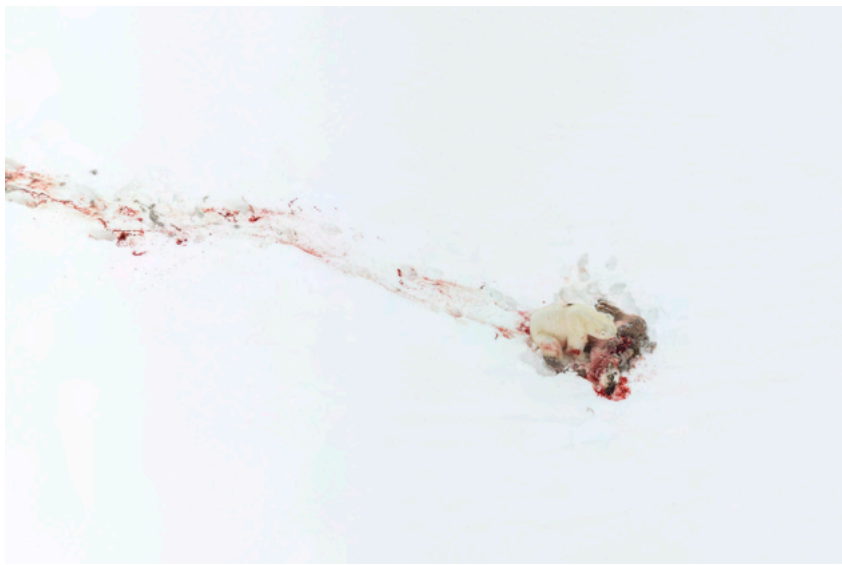




| FROM TOP TO BOTTOM: A reindeer in the snow. | The Grinch with her freshly caught reindeer. | The reindeer was caught late at night in spring. | A reindeer's antlers lie in the snow.

| MAIN IMAGE: The Grinch, a three-and-a-half-year-old female polar bear, just caught a reindeer.










*Peekaboo on ice:  
The young Grinch  
plays with walrus  
at the ice edge.*



A polar bear is seen walking across a vast, fragmented field of sea ice. The ice consists of numerous small, irregular floes of varying sizes, some of which are partially submerged in dark water. The bear is positioned in the lower-left quadrant of the frame, moving towards the right. In the background, a flat, snow-covered landscape stretches to the horizon under a pale, overcast sky. A small, snow-capped mountain peak is visible on the far left. The overall scene conveys a sense of isolation and the harsh, cold environment of the Arctic.

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different herds. The individual chases we observed lasted between 1.3 to 2 minutes on average, with the longest chase reaching 3 minutes and 50 seconds. Despite these extended efforts, the success rate varies depending on environmental conditions, and there are periods when the bears go without a successful kill.

Snow conditions, such as the depth and hardness of the snowpack, play a significant role in determining the success of a hunt. Bears have the advantage of running in deeper snow, where reindeer struggle, but harder snow allows reindeer to escape more easily. Additionally, warmer weather followed by a refreeze can hinder bear hunts, as the noise from walking on icy snow alerts reindeer from a greater distance. Sometimes, the young bear Svetlana has driven reindeer off cliffs or into the water and swam after to catch it.

It's important to note that this behaviour has existed among polar bears for many years. It now seems that certain individuals, mostly younger bears like the Grinch, Svetlana, her brother, and the cubs of other families in the southern fjord system, have specialised in the unique behaviour of hunting reindeer. Their respective mothers, who taught them how to hunt reindeer, continue to hunt seals traditionally on the ice.

The reasons behind the increase in sightings are manifold. As Svalbard undergoes rapid change, with sea ice largely declining in winter, polar bears appear to be using land more often to travel. They follow the frozen fjord coastlines or venture into valleys, bringing them into more frequent contact with reindeer. Simultaneously, the reindeer population has grown significantly over the last few decades. Furthermore, increased human activities have led to more observers in the field, altogether resulting in a higher frequency of sightings.

According to studies, the Svalbard archipelago in the Arctic is warming six times faster than the global average and some researchers suggest that Svalbard's glaciers – representing 6% of the planet's glaciated area outside Greenland and Antarctica – will be losing ice at double the current rate by 2100, regardless of whether global climate targets are met or not. The region is heavily impacted by Arctic amplification, a process in

which the decline of sea ice and atmospheric warming exacerbate each other. When the light and reflective ice melts, a darker ocean emerges which, in turn, amplifies warming because the ocean surface absorbs more heat from the sun than snow and ice. Add to this the increase of thunderstorms in the tropics which constantly transport warmer air toward higher latitudes, and Arctic amplification is made even worse.

The Barents Sea in which the remote Svalbard archipelago is situated is home to around 3,000 polar bears, about a ninth of the global population of the species. While the retreating sea ice shortens their possible hunting season, researchers have found that the bears in the region seem to be thriving, nevertheless. They believe that the reason for this could be the low density of bears in the area which could mean less competition for food resources. Another potential reason could be that the polar bears are adapting well to the changing environment and start looking for different food sources away from the ice – a theory that our observations might assist.

While much remains to be understood, such as how successful polar bears can be during the summer without snow cover, the documentation of these incredible scenes serves both as a scientific observation and as insight into the species' resilience and adaptability. However, it also raises important questions. In Svalbard, many animal populations are slowly recovering from centuries of overhunting, which once brought them to the brink of extinction. Whether polar bears will survive the loss of sea ice remains uncertain, as it is unclear how their predation on reindeer or other food sources might sustain them in the long term. Therefore, it is crucial to continue studying their behaviour to better understand the far-reaching implications of climate change. It certainly shows that the main threat to the polar bear is the ongoing slaughter that carries on as humans hunt nearly 1,000 every year, adding to the changes they face within their ecosystem.

This story is more than just a striking visual narrative, it offers hope, reminding us that when we protect nature, its resilience can be remarkable. **❶**

*The Grinch's fur, after eating a reindeer, is stained by blood as she stands under the midnight sun in spring.*