

# Survival Strategies in the Wild Arctic

By John Bechtel  
Freelance culture and travel writer

The book *Wild Arctic: the Polar World of the Northern Hemisphere* by Hälle Flygare and friends might, at first glance, appear to be just another coffee table book, a pictorial essay about the polar fauna and flora of Alaska, Canada, Greenland, Iceland, Svalbard, Norway, Sweden, Finland and Russia. Indeed, that is apparently its intended purpose according to its title page. And yet, for this reader, virtually every page overflowed with the common theme of all life on this planet trying to survive, to adapt to constant change in its environments, with some succeeding and some failing and disappearing into extinction.

This book is about food and food sources, about predators and prey, about fecundity and population size and growth, about infant mortality, about deadly competition for resources including mates, territory, and dominance. It is about mysterious climate change for unknown or misunderstood causes, about flight, desperate mass migrations, about death and gore.



Behind the beauty, cuteness and the promise of the young lies the threat of sudden death for all. This book abounds with details of the myriad adaptations of all species to survive long enough to reproduce themselves. Some of the behaviors and adaptations are comical from a very high altitude, but life and death for the participants, including us readers, homo sapiens, the apex predators of the planet. It would be a great mistake to assume we are somehow immune to the lessons of our evolutionary history. Wild

Arctic makes no pretensions or predictions, and provides no alarming or comforting philosophies about the meaning or the lessons of the polar world, but one cannot read the text without serious contemplation about the brevity and fragility of all life.

This story is at the very least tens of thousands of years old, and it is as current as today's local newspaper. Consider just a few examples offered and illustrated in *Wild Arctic*:

## Apex predators

Modern man, as we have come to know him, was evolving in Africa about 130,000 years ago, at a time when his predecessor the Neanderthal was dominant in Europe. The continents were arranged somewhat differently at the time, and the world's largest-ever contiguous landmass and biome stretched from what is today Great Britain east across Eurasia to Alaska and northern Canada. Ice ages came and went, with massive glaciation (meaning blankets of ice several miles thick) and subsequent melt-offs. Geologic time is marked by such glacial periods, and the spans of time marked by global warming between one such glaciation and the rise of the next one are interglacial periods.

The polar bear as an apex predator developed from Eurasian brown bears that ventured north beyond the tree line about the same time that we developed as homo sapiens, and perhaps surprisingly, those polar bears survived the last interglacial period of global warming when ocean levels were 15 feet higher than their current levels today. The bears survived mostly by hunting seals on sea ice. Their forebears (no pun intended) such as Deninger's bear and the huge short-faced cave bear were hunted into extinction successively by other apex predators, first the Neanderthals and then by modern man. Many other megafauna such as mammoths, mastodons, ground sloths, Irish elk, and saber toothed and scimitar cats followed the great bears into extinction during a period which ended about 11,000 years ago. It was during this time period that grizzlies, gray wolves, and homo sapiens came to North America across the Bering land bridge.

bear weighs in at about 1300 pounds. The only Arctic animal larger than the polar/grolar bear is the walrus, weighing as much as 2400 pounds. The twin tusks of a bull walrus can reach a full meter in length. Generally speaking a polar bear won't mess with a healthy bull walrus but is not above poaching one of the walrus young.

## Survival does not always favor the big

Polar bears, like some other carnivores, occasionally kill and eat their own kind when the usual food supply is scarce. (Homo sapiens are the only species known to have engaged in this practice, called anthropophagy, for symbolic reasons rather than hunger.) The population of predators varies with the population of prey. If the supply of seals increases, it encourages a surge in the population of polar bears, and vice versa. As the food supply thins out, predators will range farther afield, and even migrate in search of food. Predators, even large ones, starve to

survival rate of the polar bear cubs is not encouraging. Says *Wild Arctic*:

"Females den many kilometers inland to avoid cannibalistic males. On the long march back to the sea she must avoid not only males, but also grizzly bears and wolves. When she arrives, if ice conditions are not favorable for hunting seals, mom and babies may starve. Less than half the cubs survive their first year and few of those are weaned at one and a half years of age; for most it is 2.5 years. Few female cubs reach sexual maturity before four years and males before six years of age."



PHOTO: MITSUAKI IWAGOMINDEN

A polar bear at birth weighs only two pounds; a baby walrus weighs a whopping 130 pounds. In the latter case, the mother has to protect the young from orcas (killer whales) in the water, and from polar bears on land. She nurses and feeds the young for two to three years.

In spite of their challenges, polar bears are found throughout the Arctic and their estimated population is stable at about 25,000.

## Reindeer (in Europe; caribou in North America) and bison

About 40,000 years ago modern man began to displace the Neanderthals in Eurasia. They developed techniques for herding reindeer, learning to kill

(Continued on page 46)



Grolar bear hybrid

PHOTO: STEVEN KAZLOWSKIMINDEN

Today, the polar bears are the largest of the bears at up to about 1600 pounds, except for an occasional grolar bear, the result of a grizzly bear that wanders north and mates with a polar bear or another grolar. Finnish brown bears have also been known to mate with polar bears. The Kodiak brown

death. Evolutionary history is replete with examples of apex predators who are no longer with us.

Life is not easy for the polar bear. During peak polar bear hunting season, from March to June, one polar bear will typically kill and consume one bearded or ring seal per week. The



PHOTO: DOROTHY KEELER/ACCENT ALASKA



North American bison

PHOTO: HÄLLE FLYGARE



Mountain goat

PHOTO: MICHAEL QUINTON/MINDEN



Cow and bull moose

BACKGROUND PHOTO: PLENEAU

(Continued from page 45)

them in large numbers and preserving the meat, and then moved on to other herbivores, eliminating essential food sources for the Neanderthals, who died out. So modern man in his rise to apex predator, contributed to eliminating his own predecessor as well as many other species. This process eventually repeated itself with the decimation of the vast herds of **North American bison**, which the authors of Wild Arctic believe was part of a plan to eliminate or subjugate early American civilization by eliminating their principal food source. The surviving species of American bison is not what would have been seen on the North American Plains as little as 15,000 years ago. Today's bison is a dwarf compared to its giant ancestor (*Bison antiquus*) with its huge spread of horns.

### Competition for females

Mating behaviors often involve violent physical combat, and in many cases one or both of the combatants can be severely wounded or killed. Some species seem to recognize the futility of this and act in their own self-preservation by play-acting. During rutting season mountain goats can cause great damage with their sharp horns and so most of their contest is about bluffing. **Mountain goats** have killed dogs, wolves, grizzlies, and people. Are humans imitating this behavior? Are more and more nations acquiring nuclear weapons so they can all play in the dominance game and try their hand at bluffing too? Do they all realize that if they ever use those weapons, they can do some real damage, including to themselves? This is like being given the biggest set of antlers in the universe and knowing if you ever use them, you all die. And no one gets the girl.

In the competition for the female size does matter, but it's not the whole story. A female **moose** definitely prefers large bulls (found throughout the Arctic region), and may even chase smaller bulls and female competitors away. The authors of Wild Arctic tell us a large bull moose may have antlers

over six feet wide, but they are less effective as weapons than as 'visual display organs functioning to impress females. Displaying, instead of fighting, works where females commonly have the final say about whom to breed with. Cow moose are notoriously choosy about their mate, and it's not always the biggest bull or the winning fighter that gets chosen.'

It's encouraging to know the underdog still has a chance.

Taken young, moose can be domesticated, and have historically been used as beasts of burden, as mounts, and one Swedish king even attempted to mount his entire cavalry on moose, hoping it would terrorize his opponents' horses.

### Drama in courtship also counts for a lot, especially with an appreciative audience.

**Eurasian black grouse** are the Casanovas of the avian world, and they have their jump fighting ritual finely tuned in a contest where apparently the winner takes all; not just the object of his affections but all of her friends, too. Two males compete in a make-shift arena (the lek) where the females have ringside seats and make their selections as the males fight for mates and territory in aggressive jump-fighting. Looks to me like a cross between kick boxing and ballet. *Bergslagen, Sweden.*

Tango anyone? **Eurasian cranes** perform mating dance displays and often call in duet. *Sweden.*

(Continued on page 48)



PHOTO: SYLVAIN CORDIER

Eurasian black grouse



PHOTO: STURE TRANEVING

Eurasian cranes





PHOTO: SYLVAIN CORDIER

Male ruffs



PHOTO: HÄLLE FLYGARE

Male white-tailed ptarmigan



PHOTO: HÄLLE FLYGARE

Barrow's goldeneyes

BACKGROUND PHOTO: WWW.NOAA.NEWS.NOAA.GOV

(Continued from page 47)

**Dressed to the Nines**

Male **ruffs** perform on the lek stage displaying elaborate and colorful head-tufts worthy of royalty. This incredible drama plays out in silence except for the sound of their wings. After mating the males take their time wandering south, like the gentlemen of leisure they seem to be. *Varanger Peninsula, Norway.*

**Not taking any Chances**

The male **White-tailed ptarmigan** isn't taking any chances with his female. He displays alone, and continues to display until she lays her eggs, making sure he is the father of those eggs. No promiscuous lek show-off here, his attentiveness to her even after egg laying permits her to spend more time on the nest while he keeps an eye out for predators. Between competitors and predators, the ptarmigan is a very busy bird. As you can see from the photo, camouflage is part of this bird's defense system against predators. That has to be nerve-wracking! Hiding in the snow and hoping the bad guy doesn't see you? Do birds feel stress?

To make matters worse, ptarmigan have another defense mechanism that is prone to unanticipated consequences. To avoid detection, it does not like to walk to its nest under the snow and leave its scent there for predators, but instead dive bombs head first into the snow to hide. Unfortunately in the spring when the surface snow starts to melt during the warm day and then freezes on the surface at night, this poor bird has been known to break its neck on impact with the hard crust.

**"Meet me where we parted last."**

**Goldeneyes** are diving ducks that are unusual in that they stay paired year after year. Other ducks engage in serial pair bonding, taking different mates each breeding season. Goldeneye females frequently return to the same breeding territory and even the same nest territory; their mates join them both there in summer and frequently later in winter habitat, even though they are separated during molt. How do they find each other? And we panic

finding a loved one in a crowded train station!

**The travelers**

The **Arctic tern** are travelers, flying from the Arctic to Antarctica and back again each year, a round trip of 80,000 kilometers. They pair bond for life and they are fearless defenders of their nest and their young, dive bombing humans or any other predator including polar bear, wolf, or arctic fox, and they will draw blood from the back of the predator's head with their beaks. That might prevent me from poaching one of their eggs, but a polar bear or hungry fox? The Arctic tern do what they can.

The **snowy owl** needs to eat four to seven lemmings a day to keep their strength up, in the summer to breed, and in the winter to survive. In their southern habitat, their usual prey is smaller and less plump than a lemming, and it takes even more kills to stay alive. They may travel more than a thousand miles in search of suitable habitat before nesting. A tagged snowy owl in Victoria Island in Arctic Canada was found 18 months later on Sakhalin Island in Siberia.

The **Bar-tailed godwit** holds the record for non-stop migration, over 11,000 kilometers each way in eight days along the north-south length of the Pacific Ocean between Alaska and New Zealand. That's a lot of frequent flyer miles. In preparation for this epic migration, they gain fat equal to the weight of the rest of their body by eating marine invertebrates and other nutritious items. To save additional weight, they shrink their internal organs - liver, kidney, gizzard and digestive track. They rebuild their organs at the end of the migrations, twice per year. The godwits must find favorable winds to complete this distance. Imagine flying non-stop and knowing you don't have enough fuel and relying on a good tail wind to get you there! Godwits in northern Europe fly to Central Africa, a distance of 4,300 km, by changing altitude up to 5.5 km to gain an average 18 km/hr during their flight. Fasten your seatbelts please.

(Continued on page 50)



PHOTO: RINIE VAN MEURS

Arctic tern



PHOTO: SYLVAIN CORDIER

Snowy owl



PHOTO: JAN WEGENER/MINDEN

Bar-tailed godwit





PHOTO: DAVID WILLIAMS/MINDEN

Whimbrel



PHOTO: KIM HEAKOX/ACCENT ALASKA

Barren-ground caribou

BACKGROUND PHOTO: WWW.NEWS.AGU.ORG

(Continued from page 49)

There may be some turbulence ahead.

Whimbrel, in this photo is fighting with a crab on an African mudflat. The whimbrel feeds on fiddler crabs by probing burrows with its long beak. A world traveler, one whimbrel, tracked by satellite transmitter, flew 5,100 km in five days to land on a Bahamas island. Better crabmeat in the Bahamas?

Barren-ground caribou (*Rangifer tarandus groenlandicus*). The caribou is a migrating species. The porcupine herd makes the longest seasonal migration, a round trip of more than 2000 km from winter range in Yukon's boreal forest to summer calving grounds at the Beaufort Sea coastal plain. The wolves are waiting. Caribou, do you know where your kids are?

### Survival by fecundity

Some species seem more or less defenseless, and they survive by sheer force of numbers. They are so far down on the food chain they seem to have no chance other than by mass reproducing themselves. Their safety seems to be only by staying in the center of the group, where they are less likely to be noticed and picked off by a predator. Historically, homo sapiens have been known to imitate this behavior, believing there is safety (if not strength) in the middle of the herd. The problem with being in the middle of the herd is that it's hard to see where you're going. The survival strategy in such cases seems to be, "it doesn't matter, as long as you keep moving. When the herd stops, you must be safe." Some Arctic examples might be: **Arctic hare**. These social animals are only active at night. In late winter they gather by the hundreds on windblown slopes where they feed on dead vegetation until everything is eaten, then disperse to other grazing areas. It should also be mentioned that the Arctic hare is quite fast, clocked at 60 kilometers per hour. You might be able to outrun the predator behind you, but where are the others? They are favorite prey of Arctic wolves, who hunt in packs.

**Arctic lemmings.** Weasels, Arctic foxes, arctic owls, jaegers and



PHOTO: JIM BRANDENBURG/MINDEN

Arctic hare



PHOTO: KLIEN & M.L. HUBERT/MINDEN

Arctic lemming

gyrfalcons prey heavily on lemmings. These predators reproduce during lemming highs and suffer reproductive failure when lemmings are scarce. During peak abundance, when they run out of food, lemmings may move in search of better pasture. In Norway narrow mountain valleys may channel migratory lemmings into rivers and lakes that are hazardous to cross. The occasional mass mortality led to the myth that lemmings commit mass suicide which has been glamorized by mass media (So much for accurate information in the middle of the herd, anyway.) If you're a lemming, you must hope the predators all around you get full before they notice you.

From the lowest and most vulnerable prey to the highest apex predators with no known enemies, life is constant adaptation in a vast numbers game. The winners get to survive long enough to reproduce more of their kind. We humans seem to be victims of our own success. We have vanquished all rivals and have now only ourselves to fear. Our most advanced societies are aging and not reproducing enough to replace themselves. Our technologies have outdistanced our capacity for evolutionary behavioral adaptation. We are the greatest apex predator this planet has ever known, and we may be simultaneously its most endangered species.

This book, *Wild Arctic: the Polar World of the Northern Hemisphere* and its magnificent photography and text gives our polarized world much to contemplate. What is our best survival strategy? Can we save ourselves?

## ABOUT *Wild Arctic: the Polar World of the Northern Hemisphere*

By Hälle Flygare, Dr. Valerius Geist, Dr. Geoffrey Holroyd and Dr. Wayne Lynch. Published by Nature In Wild Places

Hälle Flygare is no stranger to subscribers of *Scandinavian Press*. We published an article entitled "Legends of the Arctic: The Hälle Flygare Story" in our Spring 2016 issue. For our newer readers, Hälle Flygare is a licensed big game hunter and nature guide from Sweden who emigrated to Canada and eventually exchanged his guns for the camera.

Flygare has been a nature photographer in six of the eight member nations of the Arctic Council; he has traveled on all seven continents and 30 countries, including two trips to Spitzbergen/Svalbard in the extreme Arctic north photographing polar bears, and three trips to Antarctica in the extreme south.

An expert on Arctic flora and fauna, Hälle has authored 12 books and brochures including *In the Steps of Alexander Mackenzie* and *Sir Alexander Mackenzie Waterways in Alberta*. His wildflower images illustrate two best-selling flower books, *Wildflowers of the Canadian Rockies* and *Wildflowers of the Rocky Mountains*.

For this book, *Wild Arctic - The Polar World of the Northern Hemisphere* he needed additional pictures to showcase the greatest wilderness on earth. It was a mammoth task that took several years to complete searching for the very best Arctic images from professional photographers worldwide.

This book represents his collaboration with Dr. Valerius Geist, Dr. Geoffrey Holroyd and Dr. Wayne Lynch, three outstanding scientists in their field for writing the text and Dr. Geist's line drawings of ice age mammals. Without their contributions Hälle says this book would never have materialized.

*Scandinavian Press* thanks the Publisher of *Wild Arctic: the Polar World of the Northern Hemisphere* for permission to use photographs and excerpts from the book for this article.



John Bechtel is a professional freelance writer for the food, wine, and tourism industries; ghostwriting non-fiction books; and web content strategist for businesses. Follow him on his website: [www.johnbechtelwriter.com](http://www.johnbechtelwriter.com)