

Polar Bear

by Despina Rosales

Can Someone Turn On A Heater Or Something?

A winter's day in the Arctic can get as cold as minus 50 degrees. This teeth-chatteringly, bum-numbingly, frozen world is ruled by its largest predator: the Polar Bear.

Yes it's freezing cold, but the Polar Bear (or *Ursus Maritimus*, as it's known scientifically) doesn't need a winter coat to keep warm. Its body is a heat-insulating machine. You see, the hairs of the outer fur are hollow and although they look white, they're not - they're translucent (or semi-transparent). They capture the sun's rays and transmit their heat to the base of the hair. Once it gets there, it's absorbed by the skin, helping to keep the bear warm.

Then there's the dense under fur, a thick layer of fat beneath the skin, and not to mention partially furred paw pads (which not only help retain heat, but - along with various tiny protrusions and suction pads - also help the Polar Bear grip the slippery ice).

And here's a weird one for you: because Polar Bears *look* a creamy white, you'd think their skin would be white. But you'd be wrong. A Polar Bear's skin is actually black.

Now That's One Big Bear

Polar Bears weigh between 400 and 600 kilograms and rival the Brown Bears as the largest terrestrial carnivores. The Brown Bear weighs a lot more (anywhere from 100 to 1000 kilograms) but is two to three metres long, while a Polar Bear can grow up to three and a half metres in length. So Polar Bears are longer, while Brown Bears can be a lot bulkier. As you can see, the jury's still out as to which bear takes the official title as The Biggest Bear, and therefore the biggest land-based carnivore on our planet.

Of the eight different kinds of bears, only the American Black Bear and the Polar Bear are not endangered, and this is due to considerable conservation efforts.

Polar Bear Calendar

If you had the chance to look in a Polar Bear's diary, you'd notice that certain things are the same every year.

Aside from breeding season, Polar Bears (like most bears) are solitary animals. But summertime comes and Polar Bears come together. Firstly, male Polar Bears fight viciously to compete for females. The loser of the battle is often killed. The winner gets the gal, and they mate.

The female's job during summer and autumn is to stock up on food. She might go without food for up to eight months while hibernating in winter and feeding the newborn cub, so she really has to get lots of eating done before fasting for such a long time. She will sometimes gain 400 kilograms during the summer and autumn eating binges. But

besides feeding, the pregnant females also start to scope out good areas to dig a den for the birth of the cub.

During winter, males go back to being solitary, and start wandering around the pack ice, hunting. Females dig the birthing den and go into hibernation. Only the female Polar Bears hibernate, and their hibernation isn't a deep one. They sleep soundly, but are quickly and easily aroused. Their body temperature drops only slightly but their heart rate almost halves. Unlike other hibernators, female Polar Bears give birth *while* hibernating.

In the spring, the cubs emerge from the den. The new mums have to guard their cubs from predatory male Polar Bears who will kill and eat the cubs given a chance. The baby bears burst onto the Arctic scene eager to learn the ways of life from their mothers.

Food, Glorious Food!

The Polar Bear is the *most* carnivorous of all the bears. This bear's main food is seal and fish, with an occasional walrus thrown in - not to mention the odd Beluga Whale when possible. These animals don't have the best sense of sight or hearing, but they do have an *awesome* sense of smell, which is what they use to find food.

The Polar Bear uses several hunting methods, but there are two main ones it employs: The Stalk and The Still Hunt.

The Stalk

The Stalk is used to catch an animal that's on land. It relies on slowness of movement and the camouflage of being a white bear in a white land. First, the Polar Bear moves towards the prey. Sometimes it'll lie on its chest with front limbs dragging by its sides, bum in the air, pushing itself forward with its rear legs. If the prey looks up, the Polar Bear makes like an iceberg and freezes.

You might be surprised to learn that Polar Bears have something in common with humans: unlike your family dog or cat who walk on their toes. Bears walk on the soles of their feet just like we do. These big shaggy creatures can walk upright on their hind legs too, but generally lumber around on all fours.

However, when they want to, they can go from lumbering to galloping *very* quickly. So during The Stalk, when the Polar Bear gets itself 15 to 30 metres away from its quarry, it charges at the animal, at speeds of up to 55 kilometres per hour.

The Still Hunt

Then there's the Still Hunt which involves an ambush of some sort. The Polar Bear might lie in wait for an unsuspecting seal that's spending some time on the

ice, paws covering the black nose to completely merge in with the white surroundings. When the time is right, the Polar Bear makes its move.

And then there's a different kind of ambush involving an animal that's in the water while the Polar Bear remains on land. Using the winter sea ice as a platform from which to hunt, the bear will wait motionless beside a seal or whale's breathing hole, waiting to grab it when it comes up for air.

However, with global warming, the Arctic ocean's ice cover is diminishing, making it more difficult for Polar Bears to use the Still Hunt technique when they're trying to stock up on food during this crucial time of year.

Live Report From The Scene

Spying on a Polar Bear requires one to be a Master Of Disguise. And in my wardrobe, I had the *perfect* costume for the job. Dressed as an ice cube, I blended in *seamlessly* with the other ice. We were getting along rather famously, actually, when I spotted my first Polar Bear and had to split!

Mamma Goes A-Hunting

This mother Polar Bear I'm watching would be famished. You see, she's just emerged from her winter hibernation and has a nursing cub. So after long months hibernating (and therefore not eating) she'd be pretty keen on getting some dinner for herself and her cub. Her first tactic is to hang around an ice hole waiting for a Beluga Whale to surface for breath.

I'm sure you agree that Polar Bears *look* cute and cuddly. But don't forget that they have enormous strength, and are well-equipped to defend and attack with their sharp teeth and claws. In fact, one blow from a Polar Bear paw and a mere human such as me or you would be a total goner.

Despite her physical virtues (and even though the Beluga Whales are weak and skinny from starving throughout the bitter winter), only one in 20 hunts is successful, so it's pretty likely that Mamma Bear will emerge not-so-victorious from her venture into the freezing water.

And - oh! there's the whale! She takes a swipe at it and then down she goes, diving in for the kill...and comes back up empty-handed. The only thing this mother Polar Bear got for her trouble is dripping wet. Looks like she's planning to go for it again. Another Beluga comes up! She swipes and dives...and it's another failed attempt...

Well, after a few unsuccessful tries, Mamma Bear has a break and spends some time rolling around on the snow. This is how Polar Bears keep their fur in good condition. The cub thinks that mum wants to play, so he rises to his hind legs and rumbles her, biting at her muzzle. (Polar Bears love to play, often using ice ridges as water slides.) But this is no time for fun, because there is still no food to eat. Off they go in search of some sustenance - and I follow them.

The very sensitive nose of the Polar Bear can detect seals 60 kilometres away across the ice. And it can detect ones that are hidden in dens one metre below the icy surface. So when Mamma Bear detects an underground seal, she uses a third hunting technique: repeatedly banging the ground with her front paws to smash through the ice. If alerted to

the Polar Bear's presence, the seal makes its escape by swimming away, and once the seal makes a break for it, Mamma Bear doesn't follow.

Tennis Anyone? Nah, I'd Prefer A Swim

Although Mamma Bear chooses not to swim after runaway seals, it's not because she can't swim. On the contrary, Polar Bears are *excellent* swimmers - but not as good as seals when it comes to underwater swimathons.

These bears use the strength in their massive forepaws to pull them through the water. And since their tail is too itty-bitty (eight to 13 centimetres long) to be used as a rudder, they trail their rear legs behind them when they paddle, shifting them this way and that to control the direction in which they swim. Not only that, the hollow, air-filled outer hairs that help insulate the Polar Bear against the cold also give it extra buoyancy.

This bear can swim distances of up to 50 kilometres in open water at speeds of ten kilometres per hour. When they dive, their eyes remain open but their nostrils close and they can hold their breath for up to two minutes. Polar Bears sometimes use these underwater skills in a fourth hunting technique: to sneak up beneath seabirds or seals that are in the water and catch them unawares.

Who Wants Leftovers?

But, back to spying on Mamma Bear and her cub: she has been breaking into seal hideouts until she finally makes a successful kill. I watched her drag the seal a short distance away from its former hiding place to begin on dinner. Now she's putting full face and paws into the meat of the carcass, and the cub is getting its fill too.

Meanwhile, I notice that seagulls are landing all around me. They would have spied the red blood of the seal's body from many kilometers in the air. These gulls rely on Polar Bear kills for their meals and they're swooping down, settling nearby to have what the bears leave behind.

Then I hear the soft stride of the Arctic Fox. During the warmer months, the Arctic Fox hunts for itself, but during winter it scavenges from Polar Bear kills. I know that in true canine fashion, the Arctic Fox will have its meal and then take a doggie bag - in other words, it will take a portion of the dead seal to bury for the uncertain times of the Arctic winter to come. In the meantime, it waits for Mamma Bear and her baby to satiate their hunger.

Soon the Polar Bears have had enough, and leave the carcass to the gulls and the fox. With a blood-drenched muzzle and forepaws, Mamma Bear walks away with her young one, satisfied that her tummy is full and that her cub will survive to see another day.

And me? Well, it's time to get out of my ice cube costume and go home.