

Kermode Bear: the white black bear

By Bruce Barcott

Photograph by Paul Nicklen

Marven Robinson, 43, is a wildlife guide and member of the Gitga'at First Nation, whose traditional territory includes Gribbell Island, a small piece of Canada's Great Bear Rainforest. Robinson often leads trips for people seeking a rare creature: what the Gitga'at call *mooksgm'ol*, the spirit bear, a walking contradiction—a white black bear.

Neither albino nor polar bear, the spirit bear (also known as the Kermode bear) is a white variant of the North American black bear, and it's found almost exclusively here in the Great Bear Rainforest. At 25,000 square miles—one and a half times as big as Switzerland—the region runs



250 miles down Canada's western coast and encompasses a vast network of mist-shrouded fjords, densely forested islands, and glacier-capped mountains. Grizzlies, black bears, wolves, wolverines, humpback whales, and orcas thrive along a coast that has been home to First Nations like the Gitga'at for hundreds of generations. It's a spooky, wild, mysterious place: There are wolves here that fish. Deer that swim. Western red cedar trees that have stood a thousand years or more. And a black bear that is white.

An hour passes. Robinson waits patiently on top of a moss-patched boulder. Then he sees a rustling in the bush. "There he is," he says.

A white bear steps out of the tree cover onto a streamside rock. Set against the dark palette of the rain forest, the bear's fur appears shabbily radiant. Not pure white, exactly. More like

a vanilla-colored carpet in need of a steam cleaning. The bear swings its head from side to side, peering into an eddy for salmon. Before it can lunge for one, a black bear suddenly comes out of the forest and runs the white bear off its perch—though "runs" might be a bit strong. Everything the bears do seems to unfold in slow motion, as if they're trying to conserve every last calorie for the coming winter. The white bear lumbers into a thicket and disappears.

the Gitga'at, one of 14 bands that make up the Tsimshian people of British Columbia's northwest coast, have a tradition to not hunt or talk about the spirit bear. They are also very protective of the black bear as well. That tight-lipped custom might have been an early form of environmental protection. By not speaking of the bear, much less hunting it, the Gitga'at and neighboring bands never let word of the creature reach the ears of fur traders. Even today the Gitga'at and Kitasoo/Xai'xais people keep a watchful eye on their bears during hunting season. "It's not a good idea to come after black bear in our territory," says Robinson. "You never know. Our bears might shoot back."



Scientists know how black bears are born white. They're just not sure why. The phenomenon, known as Kermoidism, is triggered by a recessive mutation at the *MC1R* gene, the same gene associated with red hair and fair skin in humans. To be born white, a bear must inherit the mutation from both parents. The parents themselves don't have to be white. They just need

to carry the recessive mutation. So it's not uncommon for white bears to be born to black parents.

White fur occurs in only one of every 40 to 100 black bears on the British Columbia mainland coast, but the trait is especially pronounced on certain islands in the Great Bear Rainforest. On Princess Royal Island, one in ten black bears is white. On Gribbell Island, directly north of Princess Royal, it's one in three. Biologist Wayne McCrory of the Valhalla Wilderness Society calls Gribbell "the mother island of the white bears."

It's unclear how the trait arose. One theory was the "glacial bear" hypothesis that Kermadecism represented a remnant adaptation from the last great ice age, which ended here 11,000 years ago. At that time most of modern-day British Columbia was still icebound, and a white coat may have offered camouflage. But the glacial bear theory raised a question: Why didn't the white fur trait die out when the glaciers receded?

Researchers have recently proved that the spirit bear's white coat gives it an advantage when fishing. Although white and black bears tend to have the same success rate after dark—when bears do a lot of their fishing—scientists Reimchen and Dan Klinka from the University of Victoria noticed a difference during the daytime. White bears catch salmon in one-third of their attempts. Black individuals are successful only one-quarter of the time. "The salmon are less concerned about a white object as seen from below the surface," Reimchen speculates. That may answer part of the question about why the white-fur trait continues to flourish today. If salmon are a coastal bear's primary fat and protein source, a successful female can feast on salmon to store more fat for winter, potentially increasing the number of cubs she can produce.

Parents

Likelihood of White Offspring

Black bear with
recessive trait



Kermode
bear



Black
bear



25% Kermode bear

25% Black bear

50% Black bear
with recessive trait



50% Kermode bear

50% Black bear
with recessive trait



100% Kermode bear