

## POLAR DISORDER

# The Edge of Extinction

Last summer, the Arctic lost more sea ice than ever before—nearly a half-million square miles, the size of Texas and California combined—devastating the polar bear’s frozen habitat. Yet, in February, despite a huge outcry, Interior Secretary Dirk Kempthorne proceeded with a \$2.66 billion oil-and-gas-drilling-lease sale that some of his own scientists believe will further doom the U.S. polar bear. Visiting the Alaskan town of Kaktovik, the author reports on this new crisis.

by **MICHAEL SHNAYERSON**

There’s one place, and one place only, to see polar bears in America.

You have to travel to the country’s northernmost point, the very apex of Alaska’s North Slope, to the permafrost shores that stretch out on either side from the Inupiat town of Kaktovik.

Kaktovik, population 300, is brutally cold most of the year, and to a newcomer it seems pretty bleak: a hodgepodge of wind-whipped cottages and Quonset huts on little Barter Island, set against the Beaufort Sea. The polar bears like it, though. In the early-autumn dusk, they rise out of the Arctic water like spectral figures, soft white smudges nearly undetectable on the gray horizon. Stealthily, in utter silence, they advance from three sides onto a beachlike peninsula just past Kaktovik’s gravel airstrip. If they were hungry, and you were



A polar bear atop summer ice floating in the Beaufort Sea, off the coastal plain of Alaska’s Arctic National Wildlife Refuge. The bears depend on the ice as hunting ground for baby seals. *Photographs by Steven Kazlowski/lefteyepro.com.*

their only meal in sight, those cute white creatures, also the world’s largest land predators, would tear you apart in an instant. But by the time I arrived, in mid-September, they’d been dining for days on prey already dead: the stinking remains of bowhead-whale carcasses.

The bone pile is the aftermath of Kaktovik’s annual whale hunt. Bowheads are officially endangered, but Inupiat are allowed, in deference to their native traditions, to take a limited number. The Kaktovik hunters take their quota of three, haul them in to this shallow shore,

then carve up and cart off a winter's worth of meat. That's when the bears move in.

On my first night, I sat in an old panel van near the bone pile with M. A. Sanjayan, 41-year-old Sri Lankan-born lead scientist of the Nature Conservancy, and several others, the van's headlights illuminating first one, then 3, then 20 bears as they materialized out of the gathering dark. On all fours the bears looked roly-poly and adorable. Huggable. Most appeared to be females: smaller, at an average 450 pounds, than males, which can reach 1,500 pounds. Padding around the bone pile, they gave no sign of their awesome power to regard any creature they see as prey.

For some time we watched the bears feast in the headlights' glow—a thrilling sight, but a sad one, too. By this time, the bears should have been readying to go back on the sea ice, hunting for seals. But each year now, after Alaska's brief and partial summer thaw, the ice off Kaktovik re-forms later and later. The bears aren't natural land animals; without the bone pile, they might starve as they prowl the shore like shipwreck survivors into late October or even November, waiting for the ice to appear.

Eventually, even the sight of two dozen foraging polar bears gets a bit eye-glazing—like one of those classic eight-hour, single-shot Andy Warhol movies. And so I was dozing off when a loud thump, right by my head, abruptly woke me.

There, gazing at me from a distance of three inches, was a female polar bear on her hind legs, her huge front pads on the window, her giant claws clicking against the glass. For a long



Males can exceed nine feet.

moment she stared at me intently, emotionlessly, sizing me up. This was no whimsical creature in a Coca-Cola ad. This was the ruler of the Arctic, with not a scintilla of fear in her gaze. Her paws were almost as big as snowshoes because, like snowshoes, they help keep the bear from pushing through fragile ice as she walks.

Polar bears, when they stand up, I was reminded, are about twice as large as when they're on all fours. This female was perhaps six feet tall; males can easily exceed nine feet. If she had wanted to, our curious new friend could easily have pushed the van over on its side, smashed the windshield, and scooped us out. Our only real protection was her lack of hunger.

Those close encounters would occur at least once a night that week. Getting Kaktovicked, we came to call it. But the bears, who finally picked the whale bones clean and started back out on the re-formed

ice, were about to get a far ruder surprise.

They were about to be Bushwhacked.

### **Bear Necessities**

For years, the warning signs had been piling up. Polar bears are Arctic creatures, spending most of their year on ice off the northern coasts of Canada and the U.S., Greenland, Scandinavia, and Russia. As temperatures in the Arctic warmed at three times the global average, evidence mounted that the ice was receding. The bears' very habitat was melting away. The consequences were dramatic.

Of the world's 19 distinct polar-bear populations (with an estimated total of 22,000), the one most carefully studied is in Canada's western Hudson Bay. Instead of hunting from the ice in late spring and early summer, scooping up newly weaned ringed-seal pups like so many hors d'oeuvres, the bears found the Hudson Bay ice melting all too soon. Many lost significant body mass when forced to swim too early to shore and stay ashore too long. Females bore one cub instead of three. Some starving polar bears engaged in cannibalism. East of Kaktovik, U.S. scientists reported four polar bears drowned. Polar bears are among the world's best marine-mammal swimmers. They aren't supposed to drown. But even polar bears can't swim indefinitely. For those four, the ice edge had receded too far.

To Kassie Siegel, 34, the growing stack of reports was a call to arms. An environmental lawyer for the California-based Center for Biological Diversity, Siegel drew up

a petition in early 2005 demanding that the Bush administration consider listing the polar bear as threatened under the Endangered Species Act (E.S.A.). Siegel is a former Alaskan-river-rafting guide whose girlish voice and tendency to giggle belie a grim determination to paddle her way through the roughest rapids. She'd worked at the Center with her significant other, Brendan Cummings, also an environmental lawyer, since the two were a secret couple in the late 1990s. "It was Brendan's idea to take up the case for the polar bear when we did," Siegel explains. The case would soon make her a national figure, while Cummings stayed in the background. "Poor Brendan, he's a saint," Siegel says with a sigh. "I get credit for so many of his ideas, but I'm just the workhorse."

Predictably for an administration that regards the E.S.A. as an irksome impediment to commerce, the petition was ignored. "That really backfired on them," Siegel says. By law, the government's failure to respond to a listing petition within 90 days opens the door for the petitioner to go to court. In December 2005, Siegel, along with Greenpeace and the Natural Resources Defense Council, filed a lawsuit. The battle for the polar bear had just begun.

The enviros had an ulterior motive, though it was hardly secret. Under the E.S.A., any species listed either as threatened or, more direly, as endangered must be protected in every way possible from what's pushing it toward extinction. Virtually every scientist who studied melting Arctic sea ice had two words for the cause: global warming. By listing the polar bear, an administration that had



The Inupiat town of Kaktovik. *By Brad Markel/Aurora.*

steadfastly denied the reality of global warming would be forced by law not only to acknowledge it but to act on it.

A year later, in December 2006, Interior Secretary Dirk Kempthorne stood before reporters to announce the results of an initial court-ordered polar-bear study by the department's U.S. Fish and Wildlife Service. Yes, he conceded, the study had shown the bear to be threatened. Not endangered yet, but threatened. So Kempthorne was issuing a formal proposal to list it. Now more studies would have to be done. In a year—January 9, 2008, to be exact—Kempthorne would declare whether the polar bear was, in fact, threatened.

A listing would acknowledge the "threat of receding sea ice," Kempthorne said at the time. But it wouldn't address why the ice was receding. "That analysis," the secretary said blithely, "is beyond the scope of the Endangered Species Act." How the bears could

be helped without taking measures to curb global warming was a conundrum left for another day.

Through the first half of 2007, Steve Amstrup of the United States Geological Survey led a team of government and independent scientists conducting nine separate polar-bear studies to help Kempthorne reach his final decision. Amstrup is a lanky, blond-haired wildlife biologist regarded as one of the world's leading experts on polar bears. Often stern and formal in public, very straight-arrow, he'd had a tendency to declare that oil and gas drilling posed no threat to polar bears. Other polar-bear scientists had viewed him warily. But then he'd come out with a blunt paper on polar-bear cannibalism that startled even his colleagues. When Siegel had submitted her petition, she'd been astonished to hear him praise it.

The upshot of the nine studies, Amstrup declared, was that the polar bear as a species was threatened.

Even under moderate conditions, he said, two-thirds of the world's 22,000 polar bears would be gone by midcentury if warming trends went unchecked. Alaska's polar-bear population would vanish completely.

As the studies appeared, the summer of 2007 came to an end—and with it the greatest depletion of Arctic summer ice ever recorded: nearly a half-million square miles, the size of Texas and California combined. Scientists from the National Oceanic and Atmospheric Administration had estimated that summer ice might vanish altogether by 2040. Now some scientists wondered if it might be gone as soon as 2012. “As the sea ice goes,” Amstrup said bluntly, “so goes the polar bear.”

By law, Kempthorne had to follow the science—and so, presumably, grant the polar bear its listing. But the former governor of Idaho, who by the fall of 2007 had served 18 months in his new post without placing a single plant or animal on the Endangered Species List, had another priority to guard in the Arctic: Chukchi Sea Lease Sale 193.

The sale, conducted by Interior's Minerals Management Service (M.M.S.), would open up 29 million acres of Chukchi Sea bottom—where 15 billion barrels of oil and 77 trillion cubic feet of natural gas were thought to lie—to oil and gas drilling. No drilling had ever been done in the U.S. side of the Chukchi, which lies between Alaska and Russia. In Kaktovik, when you scan the horizon to your right, you see the Beaufort Sea. To the left is the Chukchi. Alaska's polar bears, though, make no such

distinction. They live happily on the ice caps of both.

In a seeming case of miscommunication between two Interior agencies, M.M.S. had scheduled its lease sale for February 6, 2008—a month after Fish and Wildlife's court-ordered final E.S.A. decision on the polar bear was due. But if the polar bear were to be listed as threatened on January 9, how could the government, in good conscience, proceed with a lease sale that directly affected the Alaskan polar-bear habitat?

### **The Numbers Game**

During my stay in Kaktovik, a plane circled down to the gravel airstrip once a day. When it did, the town came to life, half a dozen old trucks rattling out to pick up passengers and supplies. Otherwise Kaktovik seemed deserted. In the biting cold, not many of its residents stroll the permafrost streets for pleasure.

Around each house, though, lay signs of a vigorous subsistence life: handmade wooden sleds, kayaks, rusting snowmobiles kept for spare parts, musk-ox and reindeer horns, and hunks of fresh, black whale meat. Over at Inupiat wilderness guide Robert Thompson's house—like the others, built on metal stilts to keep it steady above the heaving permafrost—I saw a more startling sight: a polar-bear skull.

Indigenous people, it turns out, are allowed to hunt polar bears as they always have, in Canada as in the U.S., at any time of year. Thompson, a compact fellow of 61 with the deep lineaments that come from a life spent outside, told me that in a year the whole village might kill at most a bear or two.

All told, though, Inupiat in the U.S. and Inuit in Canada kill perhaps 50 bears each year. Some 200 more are hunted by Inuit in Greenland, with arguably even more hunted illegally in Russia. Worldwide total of bears killed each year: at least 500.

How could this be, with a species so besieged? Bjorn Lomborg, who bills himself as a climate-change realist, asks that question at the start of his latest book, *Cool It*, in which he makes the case that global-warming rhetoric is way overblown. The polar bear is his Exhibit No. 1.

The world's polar-bear population, Lomborg points out, has more than quadrupled in the last 40 years, from about 5,000 to 22,000, through stricter hunting regulations. (Credit for that goes to the 1973 International Agreement on the Conservation of Polar Bears, which banned the odious practice of aerial polar-bear hunting. So-called sportsmen in helicopters would hover over hapless groups of bears on the ice and blast away.) Now more bears are seen on land than ever. As a result, more and more are hunted by indigenous peoples and, in Canada, by any U.S. trophy hunter willing to pay the roughly \$40,000 cost of a trip.

So, says Lomborg, the evidence for dwindling bear populations is shaky at best. And if we're so concerned about preserving them, why not ban hunting outright? Wouldn't that be more productive than spending trillions on a Kyoto-like treaty to make tiny reductions in fossil-fuel emissions that would have almost no effect on bear populations for years?



A bear scans the Chukchi Sea, off Point Barrow.

It's a powerful argument, one that's gotten the handsome 43-year-old Dane with blond ringlets a lot of media attention. But it's also an argument that's been hotly debated. The population spike, observes leading Canadian polar-bear biologist Ian Stirling, ended some time ago. By building his case on it, Lomborg seems to ignore all recent studies that show polar-bear populations diminishing due to vanishing sea ice. "Lomborg is downright irresponsible," says Stirling, "in not considering sea ice." (Lomborg says he does consider sea ice with regard to polar-bear population.) More polar bears on land, says Robert Thompson, the Inupiat hunter and guide, is a sign of bears in trouble, not of a booming population. And bear-hunting in both the U.S. and Canada, Stirling notes, is based on sustainable yield. Which means that the number of bears killed by hunters each year cannot exceed the number of cubs that replace those bears. The quota is adjusted annually. So a ban on sustainable hunting would have virtually no effect on the overall

number of bears, much less on the climate change that's melting their world.

Thompson is both a hunter and an environmentalist. The greatest global and local threat to the polar bears of Kaktovik, he says, is the oil-and-gas industry. It's the greatest threat to all living creatures, including man, in this still-gorgeous stretch of the North Slope. Kaktovik's backdrop is the pristine Arctic National Wildlife Refuge, with its magnificent, snow-covered, 9,000-foot-high Brooks Range, where musk ox and reindeer, beavers and grizzlies, live in America's last untouched wilderness. Almost every year now, the industry pushes Congress to open anwr to drilling, usually losing by a mere vote or two. Offshore are the Arctic waters where the polar bear is but the top of an entire food chain of aquatic life at risk. For at least a decade, the industry has wanted to drill there too.

Thompson was passionately opposed to offshore drilling, and felt the oil companies had been

less than candid with the Inupiat about their plans. "They do have a requirement to meet with us, but they don't seem to have a requirement to tell us the truth." Anyway, he adds, "the ocean's been doing just fine for thousands of years without them." But the oil industry is still popular with many of Thompson's neighbors, and on my walks around town, I soon saw why.

The oil industry built Kaktovik's power plant and supplies electricity for free. It spent \$98 million to install 98 flush toilets. It built the fire station and supplied the fire engine. The town's public school has a handsome new library, courtesy of oil money, and classroom space for at least double the entire student body of 67. One way or another, most of the town's public works—and jobs—flow from oil.

So far, Kaktovik has gotten all of oil's benefits and none of its ills, which is why polar bears still gather on its shore, 100 miles east of Prudhoe Bay's ghastly hellscape of flaring oil wells, drill pads, pipelines, and production plants. More and more, it reminded me of a 1983 movie, *Local Hero*. Writer-director Bill Forsyth's story is of a young, ambitious Texas oil executive sent to a Scottish coastal village. The executive (played by Peter Riegert) has a secret mission: to buy up every property in the village so that his company can more easily exploit the offshore oil it found there. Little by little, the executive succumbs to the village's charms and eccentric characters, and ends up trying to talk his company chairman (Burt Lancaster) into saving it instead.

Like the fictional town of Ferness, Kaktovik has its share of quirky

characters. At the Waldo Arms, a rambling assemblage of modular oil-field-camp buildings that serves as an inn and social center for the town, I met manager Art Smith, a 54-year-old hippie with long silver locks who left his life in the lower 48 more than a decade ago. Now he spends hours in the snow, not just photographing polar bears but, he feels, communicating with them. "I've gotten close to them in a way that's not supposed to happen," he explained, "but it has."

Smith lives in a one-bedroom cottage so packed with video equipment there's hardly anywhere to sit down. Aside from food and rent, the equipment is about all he's spent money on in the last few years. On a big, high-definition screen, he played footage of polar bears no more than a few feet from his camera. With one female bear, he seemed to be playing tag.

"Not literally," he hastened to add. "Figuratively. She would come so far up the bank, and I'd tell her, 'O.K., don't come any closer,' and she'd respect that. Then I'd be shooting, and she would do the same to me. So I'd back up, she'd come back, then she'd back off—it was this thing that went on for about an hour and a half."

On the screen, the bear rolls around on her back in the snow, her feet up in the air. "It's so rare in nature that you get to observe large predators that have moved above hunger," Smith said. "You see their real behavior."

The similarities to Timothy Treadwell, the ill-fated grizzly-bear-lover whose story was told in a 2004 Vanity Fair article by Ned Zeman, and in Werner Herzog's 2005 film *Grizzly Man*, were too

striking not to mention. But Smith waved them off. "I mean, sure there was a risk," he said of his "tag" with the female. "But you get in your car and drive to work, it's a risk. This is my risk, and it's the risk I choose to define my life."

For his bear communing, Smith stays on or close to shore. Following bears out to their winter-ice home would be not only dangerous, he pointed out, but a violation of the Marine Mammal Protection Act. Only Inuit—and scientists—can do that. When the ice is shore fast again, though, he does drive a short distance out on a snowmobile or in a truck to photograph bears that haven't yet lumbered off toward the Arctic horizon. Not long ago, he nearly lost his life that way.

"Sometimes you run into a transient bear from a different population," Smith recounted. "And that bear won't have the history of interaction with humans that the Kaktovik bears have." Smith was filming a group of bears in one direction when another bear, perhaps a transient, crept up from behind. The bear was low to the ground. "If they're stalking game, the last thing they do is stand up because it gives them away," Smith explained. "They'll put their chest down and cover their noses. If they're stalking you, they're on a slow steady gait, just coming in on a beeline."

Smith just happened to turn around. The bear had come in low on his blind side. "They know how to do that," he said. The bear wasn't baring his teeth. He was huffing and growling, his mouth wide open. Smith knew the signals. Once he made eye contact with the bear, it disengaged. "But had I not turned around," he admitted, "he would

have fulfilled his mission."

Smith's story seemed an adventure yarn far from any experience I would ever have. And yet the very next day, the human being whose blind side a polar bear crept up on was me.

## Close Encounters

I was out by the bone pile with M. A. Sanjayan, the Nature Conservancy lead scientist, and two Smiths: Art and a British documentary-maker named James (no relation), who had hired Art for the week as his cameraman to help him film the Kaktovik bears. This would be the last part of a series called Expedition Alaska for the Discovery Channel (scheduled to start airing April 20). Sanjayan is one of the hosts of the series. This was his last "stand-up," in which he would sum up the plight of the Kaktovik bears against a backdrop of Arctic sea and sky.

Usually, the bears spend September days lolling about on a barrier island half a mile from shore. Through binoculars, we could count more than a dozen of them out there. Still, as a precaution, James Smith asked me to be on the lookout.

For some time I kept a careful vigil, turning around every 30 seconds or so to check all three sides of the bone-pile peninsula. But Sanjayan was so eloquent that I found myself drawn in to what he was saying. "Not till I came up here did I feel in my heart what I understood in my brain as a scientist," he said to the camera. "Namely, that some of these cubs we've seen may be the last generation of polar bears on American soil."

When the shot was done, James Smith turned toward me. A look of

panic swept his face. Behind us, not more than 30 feet away, was a polar bear. Quite a large one, heading our way. Down low, just as Art Smith had described.

The bear paused, debating whether to go for the bone pile or us.

We stood still, our hearts racing. Sanjayan had mentioned that the best defense against an advancing bear is to look as “big” as possible. Stand straight, put your arms up, and if the bear keeps advancing, start shouting. At that moment I don’t think I could have raised my arms. I was frozen to the spot.

The bear looked at us. We looked back. Fortunately, the bone pile was closer to him than we were. Perhaps to the bear, it also smelled better. He turned toward it, away from us, and the moment was past.

That seemed adventure enough for one Vanity Fair assignment. But that night, late, we were back at the bone pile for an even more dramatic sight. As a dozen or more polar bears fed at the diminishing bowhead carcasses, a pair of bright eyes shone in the darkness. As soon as they appeared, the polar bears scattered.

“What the hell?” Sanjayan exclaimed. He reached for a pair of night-vision goggles and switched them on. There in the reddish glow was a huge grizzly bear, so fat that its stomach dragged along the ground. “That’s so bizarre,” Sanjayan whispered. “Grizzlies aren’t supposed to be on flat coastal plains. They aren’t supposed to be anywhere near polar bears, either.”

For a while the grizzly fed alone at the bone pile. Then, slowly, one or two of the larger male polar bears

edged back toward him. The largest polar bear growled and clicked his teeth as he advanced. The grizzly gave no ground.

Now the grizzly and the polar bear started cuffing each other. Not trying to inflict injury—just posturing. Sanjayan had assumed the grizzly would retreat: the polar bear was bigger, after all. But it was the polar bear that finally withdrew.

Later, Ian Stirling, the Canadian polar-bear expert, confirmed that a sighting of a grizzly and a polar bear together was extremely rare. He wasn’t surprised, though, to hear the polar bear had blinked first. Grizzlies, he observed, are land animals in open country. Flight isn’t necessarily a viable choice. Instead, they have to fight. “So they have to be highly aggressive,” Stirling explained. “Whereas the polar bear’s whole strategy is to conserve energy in all phases of life. So avoidance of conflict is their predominant strategy.”

The standoff had another, more profound implication. Scientists agree that polar bears evolved from grizzly bears—almost yesterday, in evolutionary time, about 200,000 years ago. In a fraction of that short time, polar bears adapted to a radically different environment—open Arctic sea ice—with astounding ecological prowess. Their white hair is translucent, the better to channel precious heat to their black, insulating skin. Their sense of smell is exquisite, the better to sniff seals at their breathing holes under the ice. Those paws that distribute their weight on the ice also serve as battering rams, punching through the hard snow of seal lairs to snatch pups before they escape.

To Stirling, who has spent a lifetime studying polar bears out on the ice, their most astonishing attribute, unique in the animal kingdom, is the way they can hibernate at any time of year. A brown bear that goes without food for 10 days in the summer will starve to death. “Not so with a polar bear,” Stirling explained. “If a polar bear hasn’t fed on anything for that long—even in summer—its metabolism switches, and it goes into a walking hibernative state.” It’s a brilliant way to conserve energy and survive in one of the world’s most forbidding climates.

As we watched the satiated grizzly fall asleep by the bone pile, and the polar bears cautiously return, it was tempting to imagine that, rather than go extinct, the polar bear might merge back into the brown bear’s lineage. Stirling rejects that theory out of hand. Polar bears are too big, he notes, thanks to their diet of seal and salmon. They could never adjust back to a brown bear’s partial diet of roots and berries. Either the polar bear with all its amazing adaptations survives as it is—or it doesn’t.

That night, like the grizzly, we all fell asleep, our breath fogging the windows of the van. Until ... thwack! We awoke startled to see another polar bear with its paws on our window. This one was clearly a male, much larger than the one who’d checked us out the first night.

Art Smith fumbled for the car keys. Somehow they’d fallen out of the ignition onto the floor of the van. For a long 10 seconds, he searched for them while the world’s largest carnivore put his face up to the driver’s side window, looking in.



A scavenging cub feasts on a bowhead-whale carcass on Barter Island.

Finally, we heard the reassuring sound of the motor starting up. The bear, with a seeming touch of regret, got back down on all fours and watched us drive away.

### Mad Scientists

‘I definitely believe that is a dangerous situation,’ said Karyn Rode, a 34-year-old wildlife biologist for U.S. Fish and Wildlife whom I found the next day at F.W.S.’s Kaktovik outpost, a house on stilts in town. Rode was taken aback to hear about our night encounters with bears slapping their forepaws against the windows. ‘I definitely believe that a bear could smash the window and drag you out,’ she said, though she had never heard of a bear doing that at the Kaktovik bone pile, nor of bears pushing cars on their sides. The Kaktovik bears, she added, have no reason to prey on humans, satiated as they are by the whale remains. ‘But the wrong bear and the wrong time can do anything—and, certainly, being on the ground within 30 feet is dangerous.’

Rode is part of the Anchorage-based Polar Bear Management Team under the direction of F.W.S.’s Scott S. Schliebe. She advises locals on how to deal with the bears—though, as she points out, she’s an adviser, not an enforcer. Mainly she’s a scientist, working with counterparts from the U.S. Geological Survey (U.S.G.S.), who’ve kept a remarkable 30-year record of the Southern Beaufort Sea bears, of which the Kaktovik group is a subset.

By marking the bears with special lip tattoos, U.S.G.S. scientists have determined that there are approximately 1,526 bears in the Southern Beaufort population. Back in 1986, using slightly less precise measures, a study concluded that there were 1,800 bears in that population. The scientists can’t say statistically that the population dropped by 15 percent, but the lower, more recent estimate and declines in survival rate and body size have led to the conclusion that the population is likely shrinking.

Rode had just finished one of the nine studies that her political superiors in Washington were presumably pondering as they inched toward a final decision on whether to list the polar bear as threatened. Hers was on polar-bear body mass.

‘It was primarily with younger males that we saw declines over time,’ Rode explained. ‘Between 1982 and 2006, on average the mass of sub-adult males declined 2.2 kilos [4.9 pounds] a year. To me, that’s a lot.’

‘The striking thing,’ she added, ‘is that the majority of significant trends from the nine reports are negative.’

Rode was careful to say that it was up to her agency’s overseers—and their superiors at Interior—to set policy from the research that she and her colleagues had done. She couldn’t discuss internal politics about the pending decision, or how Lease Sale 193 might affect it.

But other Interior scientists, it turned out, could—and did.

All through 2007, as Rode and her colleagues from U.S. Fish and Wildlife and the U.S. Geological Survey were doing studies that showed how threatened the polar bear is, managers at both F.W.S. and Interior’s Minerals Management Service were reaching a very different conclusion: that offshore oil-and-gas drilling in the Chukchi Sea off Alaska would pose no major threat to polar bears that live on the Chukchi’s sea ice.

Now all they had to do, as Kassie Siegel saw it, was make sure that Lease Sale 193 occurred before the polar-bear-designation decision.

Shane Wolfe, a spokesman for the Interior, flatly disputes this version of events. "Lease Sale 193 was originally scheduled for June 2007," he notes, "but M.M.S. delayed the sale to complete its environmental analysis in cooperation with the [F.W.S.]."

Wolfe says the timing was not only coincidental but irrelevant. Whether or not the polar bear was declared "threatened," Lease Sale 193 would move ahead. After all, Wolfe observes, other threatened species live in the lease area, starting with a duck called the spectacled eider. Yet "the agencies were able to add conditions to the lease sale to mitigate any impacts to this already listed species." Conditions would be added as needed to protect the polar bear too. And the F.W.S., Wolfe notes, had already determined that oil-and-gas development worldwide is not a threat to the survival of the species.

But from four current and former M.M.S. scientists a more nuanced story emerged—of an agency culture that all too often has failed to take heed of its experts' concerns about offshore Arctic drilling. The scientists insisted on speaking off the record, to protect them from what they felt would be certain retaliation by their superiors. For starters, one pointed out that all the oil-and-gas drilling done to date in the Arctic has been either onshore or very close to shore. That's not where polar bears live.

Two years before, one scientist explained, the M.M.S. had told the oil-and-gas industry it would hold Lease Sale 193 by mid-2007. Initially, there had been little interest in the Chukchi, because the cost of

extracting was deemed too high. Then up, up, up went the price of oil. Suddenly, drilling there looked more economically feasible.

But, the scientist says, there was concern among the agency's managers that staff scientists would drag out their studies of species they believed were affected. That might delay the sale. A six- or eight-month delay could be tolerated, but if the scientists took much more time than that, the lease sale might not be held before the next presidential election. A new administration might have a different view of offshore drilling in the Chukchi Sea. So, the scientist says, critical details about the oil companies' potential operations in the Chukchi somehow failed to reach staff scientists. "It was so important to know how many drill rigs we're assuming, how many seismic boats, how many miles of pipeline—they all have huge effects on the analysis," explained the scientist, who believes the information was understated. (Wolfe says, "Our environmental analyses encompass the total spectrum of possibilities ... in our evaluation of a geographic area such as the Chukchi.")

The scientist says their findings were then distorted. "This was a wrenching issue for a lot of analysts," one M.M.S. scientist recalls. "They were trying to get a true sense of the trade-offs, and get that information out to the American people. And then things would just get changed by geologists, for the most part, who had no business modifying a single word that an anthropologist or fisheries biologist wrote. They hadn't read any of the literature." ("We encourage debate and discussion, particularly between scientists and managers,"

counters Wolfe. "However, there comes a time when a decision has to be made. Not everyone may agree with [it].")

One of the biologists' biggest concerns, not just for polar bears but for all marine life in the Chukchi, was a major oil spill. They needed to know exactly what the oil companies were planning, so they could reach some conclusions about how likely a spill would be, how destructive it would be, and what the oil companies would do to contain it.

### Shell Game

Experience shows that getting accurate environmental assessments before lease sales happen is a good idea. After Shell won drilling rights in the Beaufort Sea in 2005, according to a government scientist familiar with the matter, the M.M.S. scientists never got the information they needed from Shell to do their analysis. An e-mail written by former M.M.S. biologist James Wilder and leaked to the Internet claimed, "Despite repeated requests over the last many weeks that polar bear issues be addressed by Shell ... Shell has completely ignored polar bears."

The scientist familiar with the Beaufort project says it was not necessarily Shell's fault that the scientists didn't get what they requested. "M.M.S. had full authority to get full information from Shell about their plans," this source says. A Shell spokesperson claims, "Any information we've been asked to provide to MMS, we've provided. There's no outstanding information. I'm confident we've complied with all regulatory guidelines."

But “if Shell did respond, [M.M.S. officials] never provided it” to the staff biologists who were preparing the report, says the scientist. It seems unlikely that the problem was a lack of communication between Shell and Interior officials. Gale Norton, Dirk Kempthorne’s predecessor as secretary of the department, now works for Shell as a general counsel for its unconventional-resources operations. Cam Toohey, Interior’s special assistant to the secretary, is now Shell’s Alaska government-and-external-affairs manager. Paul Stang, formerly a Leasing and Environment supervisor, is now a consultant who has worked with Shell. (Interior’s Shane Wolfe responds with a very narrow definition of potential conflicts of interest, stating that former federal employees are banned from “representing any outside entity back before the government on a particular matter involving specific parties that the employee was personally and substantially involved in while employed by the government.”) So perhaps it’s no surprise that polar bears and their scientist advocates were left out of the loop.

In its final Environmental Impact Statement for Lease Sale 193, the M.M.S. did admit that the impact of an oil spill on polar bears in the Chukchi poses a “major concern.”

Ian Stirling, the Canadian polar-bear expert, expresses those concerns succinctly. “Basically any bear that finds itself swimming in oil will die,” he says. The bears will ingest oil directly; when they haul themselves up onto ice, they’ll ingest more by licking their fur to try to clean themselves. “If they get even a small amount of oil on them they lick it—bears are extremely

clean,” Stirling explains. “That gets in their kidneys and they die.”

What would the oil companies do if a spill occurred? Recovery plans wouldn’t be required until after the lease sale, when the winning bidders move to the next stage of planning. But the M.M.S. acknowledged that the Chukchi Sea’s broken-ice conditions would make any spill response difficult. “Considering the distances involved and the vagaries of the weather along the Chukchi Sea coast,” its impact statement observed, “personnel and equipment based in Prudhoe Bay may be unable to respond to oil spills in the Chukchi Sea in a timely and efficient manner.”

Even that somber assessment, says Rick Steiner, marine-conservation professor at the University of Alaska, glosses the truth.

“In broken-sea-ice conditions, there’s simply no way for a skimming operation to be effective,” Steiner says. “And the oil travels under sea ice—10 times faster and farther than had been previously suggested. And you just can’t recover it. Some will freeze under the ice; when the ice travels, the oil travels with it. When the ice melts, it releases the oil and the spill radiates out.”

Interior’s Shane Wolfe says, “The technology does exist and is continually being developed for cleaning oil spills in the various conditions present in the Chukchi Sea.”

The issue of oil-spill technology is clearly a crucial one, since the M.M.S. projects that the chances of a large oil spill occurring in the Chukchi are between 33 and 51 percent. Steiner says those odds are

probably low. “That 33 to 51 percent was per facility. If they have several facilities, you have more chance.” To him, the implications are both stark and appalling. “If the federal government is permitting an action which they reasonably expect to lead to a major spill, isn’t the government knowingly permitting an illegal act? Because it’s against the law in the U.S. to deliberately spill oil.”

As the impact statement for Lease Sale 193 moved forward, some M.M.S. scientists tried to get their edited work restored to what they’d written. “When people would keep pushing, they’d get punished,” says one M.M.S. scientist. “Yelled at.” Scientists from one team were told not to share their work with other teams or even talk to them. The most stubborn of the analysts found themselves put “in a box,” as one put it: isolated from the others, their work ignored, their performance evaluations downgraded.

One by one, some of the M.M.S. scientists in the Alaska office quit, or transferred to other, less stressful government agencies.

But Lease Sale 193 kept moving along toward its February 6 sale date. If the timing was, as Shane Wolfe declared, incidental to that of Fish and Wildlife’s January 9 decision date for the polar bear, how was one to explain what happened next?

### **Going, Going, Gone**

The week before Fish and Wildlife was legally bound to issue its polar-bear decision, Kassie Siegel did a lot of walking in the California desert. She lives just outside Joshua Tree National Park, and likes to write in her head, as she puts it, while

she marches along. That week, she wrote and re-wrote a 60-day-notice letter—the letter she'd send if Fish and Wildlife missed its January 9, 2008, deadline.

All December the agency had been ominously silent: not a good sign. But then, that weekend, Siegel saw her first Phainopepla of the year: a black bird of the desert once common where she lives, now quite rare. It gave her a sense of hope.

On Monday morning, January 7, that hope was dashed. In a terse press release, F.W.S. announced a delay of up to one month, likely putting it after the scheduled date for Lease Sale 193. The delay was a statutory violation; to Siegel, it was, on its face, illegal. She filed her 60-day-notice letter.

On January 17, with the clock ticking on Lease Sale 193, Congressman Edward Markey (Democrat, Massachusetts) convened a subcommittee hearing to learn why F.W.S. had missed its deadline and why Lease Sale 193 couldn't be reset to follow the polar-bear decision, whenever it came.

Dale Hall, a career Fish and Wildlife employee who had been made director in 2005, looked very much as if he'd rather be fishing than trying to explain an inexplicable delay. Some 600,000 public comments had come in on the polar-bear-designation question, he offered. All those had to be read and considered. That took time. "It's not just making the decision," Hall said. "It's making it clear and why."

To Hall's right sat Randall Luthi, director of the Minerals

Management Service. Luthi is a Wyoming native who in the 1980s served as an intern to then congressman Dick Cheney. He had become a state representative, then retired to private law practice, when President Bush called on him in early 2007 to be deputy director of Fish and Wildlife. Just months later, he was named the new director of the M.M.S. Luthi felt he understood both agencies' needs, and was looking out for them. "We wouldn't be proceeding with this sale," he told Markey, "if we weren't comfortable that we had enough knowledge to ... see that the polar bear is protected."

Kassie Siegel, sitting with two other advocates at an adjacent table, marveled that Luthi could say that, given the 33 to 51 percent odds of a major spill. That man, she thought, is simply lying to the American public. ("The lease sale itself does not grant carte blanche to the industry," responds Shane Wolfe. "In order for a project [resulting from the sale] to be approved, the company must have an Oil Spill Response Plan and must demonstrate the capability to carry [it] out.")

Markey, a dour figure with a fine Boston accent, listened as a few of his colleagues challenged the two directors. Then he asked a question that cut to the chase. "Mr. Hall, would you mind if Secretary Kempthorne made a decision which postponed the decision on the leasing of the Chukchi leases until you made your decision [on the polar bear]?" "It wouldn't impact what I'm doing at all," Hall said. "So it would be his decision, and whatever he wants to do is fine with me."

Markey nodded. "Mr. Luthi? Would you object if Secretary Kempthorne decided to allow Mr. Hall to make his decision first before you announce your decision?"

"Certainly the secretary is my boss. That would be his decision. If he should do so, if new information were available and he should make such a decision ... "

"Well, there is new information available," Markey observed, "and that is that Mr. Hall is not going to be able to make his decision [before yours] unless something happens that once again keeps the order in place that had been decided upon."

All Kempthorne had to do, Markey suggested, "is say, 'Let's use common sense. Let us ensure that we understand that extinction is forever, and we must make that decision first before we send the oil and gas industry out into the critical habitat to break up the polar bear's ice.'?"

But Kempthorne viewed his decision in another way. On Wednesday, February 6, a crowd of oil-and-gas men, government officials, and journalists filled a library auditorium in Anchorage, Alaska, and bids on hundreds of sea blocks in the Chukchi were read.

Like onlookers at an auction of rare paintings, the crowd began to "ooh" and "aah" as eight-figure bids were announced. The most heated competition was between Shell and ConocoPhillips—one Shell bid topped out at \$105,304,581. Both companies had run seismic surveys in the Chukchi. They seemed to know where the richest reserves lay.

Luthi was there at the sale to preside, and to celebrate when the sale set an all-time record for oil-and-gas-lease sales in Alaska: \$2.66 billion. He told the crowd that many steps had been taken to protect the polar bear and its habitat: “Through these reviews, we assessed the potential direct, indirect, and cumulative effects of the lease sale on marine mammals, including polar bears.”

Early February came and went without a polar-bear decision from Interior. No new decision date was mentioned.

On March 10, Kassie Siegel made good on the threat in her 60-day-notice letter. Together with Greenpeace and the Natural Resources Defense Council, the Center for Biological Diversity filed suit against the Department of the Interior for missing its deadline on the polar-bear decision. Already, the Center and other groups had filed a separate suit against the government in regard to Lease Sale 193. Their claim is that the environmental analysis done for the lease sale was sorely inadequate.

As this story went to press, I e-mailed Interior spokesman Shane Wolfe to ask if he could give me a date for when the department would decide, at last, if the polar bear is indeed threatened. “We expect a decision very soon,” he replied.

By then the polar bears of Kaktovik were out on winter ice, happily oblivious to the world’s coldest weather—and its politics—as they sniffed for seals near the ice edge over the continental shelf. Not many people have seen them in repose: they tend to run at the sight of Inuit hunters on snowmobiles, or scientists in helicopters hovering overhead to anesthetize them in order to tag them. But Ian Stirling, the Canadian biologist, has. He has probably seen more polar bears on sea ice, for longer periods of time, than almost anyone else.

For weeks at a time each winter, Stirling and colleagues observe them through high-powered telescopes from a pair of cliff-top cabins on Devon Island, in the Canadian high Arctic. “You observe an animal that’s not only beautiful and impressive in its size,” he says, “but you get a sense of how exquisitely polar bears have adapted to survive in one of the most rigorous environments in the world. We often think of them as living in a harsh environment, but to a bear it’s not harsh at all. It’s home, and a comfortable home at that.”

That home is now changing, and so threatened are the bears, Stirling notes, that it’s easy to assume their extinction is a fait accompli. “I’ve been absolutely stunned by the

junior-high level: young people just assume it’s all over, the bear is gone. But it’s not, and we mustn’t lose hope,” he says.

Despite the gloomy predictions of severe population loss worldwide by 2050, and of no more polar bears in Alaska, Stirling argues, even the worst-case studies show ice remaining in the northwest Canadian Arctic islands and in northern Greenland in winter. “That’s the best hope for polar bears,” he says. “So we do have some time before we look at the possibility of extinction.”

But not much.

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