

“What’s nice about this project is that people can enter it in many different ways and on many different levels,” says Allison, a Gemini-Award-winning documentary filmmaker based in Canmore, Alta., whose previous films include *Being Caribou* and *Finding Farley*. “If they’re interested in wildlife, then they’re going to totally groove on the wildlife. But I think a real success of this project is that we’re reaching people who may not necessarily gravitate to these stories in the first place.”

From the opening sequence of *Bear 71*’s tagging, the film quickly morphs into an interactive application that lets viewers explore the bear’s habitat through a digitized, 3-D topographic-like map of Banff. Viewers can roam the park and access selections of the thousands of trail-cam images to learn more about *Bear 71*’s neighbours, both wild and human, and their habitat.

All the while, actress Mia Kirshner takes on the voice of *Bear 71*, narrating her story through the birth of her cubs, her interactions with an increasingly humanized environment and, finally, her death on the train tracks that cross the park. “The story itself is a reflection of our relationship to nature,” says co-creator Mendes, a Vancouver-based freelance artist who specializes in interactive media projects. “Even though the media is technology, the narrative itself reveals the crux of a story, which is the relationship between people and animals.”

Produced by the National Film Board, *Bear 71* has been viewed more than 200,000 times since the project went live in January. It was subsequently nominated for three Webby Awards (often referred to as “the Oscars of the web”) and has been generating buzz on the film-festival circuit. It premiered in January as an interactive installation at the Sundance Film Festival in Park City, Utah, where a host of technologies including motion-sensors, trail cams and data visualization placed the audience in *Bear 71*’s virtual world. It also opened Vancouver’s DOXA Documentary Film Festival in May.

Says Allison of the project: “We wanted *Bear 71* to be a bridge between a million years of evolution as a grizzly bear and the last few decades of technological advances.” Based on the audience to date and the accolades, *Bear 71* has done just that. 🐾

To explore *Bear 71*, visit bear71.nfb.ca.



We’re Under Their Spell

Why are some animals conservation stars and others aren’t? Part of the answer lies in our lizard brain

By Jay Ingram Illustration by Julia Breckenreid

CUTE AND CUDDLY

Canadian scientist Ernie Small’s recent articles in the journal *Biodiversity* noted that beautiful species, such as seal pups, reap huge conservation efforts, while the majority of species in greater need of help receive little attention.

I recently read a pair of articles in the journal *Biodiversity* by Ernie Small of Agriculture and Agri-Food Canada called “The New Noah’s Ark,” parts 1 and 2. He’s writing about the choices we make in selecting organisms to headline conservation efforts. It’s not straightforward: you’d want conservation organizations to take as much hard data into account as possible when making program choices, but there’s much more to it than that.

Conservationists must allow for the public’s affinity for organisms that require protection. Charisma is hugely important; the redwood has it, the Manitoba maple does not; snakes have it, toads do not. But the most charismatic species are not always the ones most deserving of conservation. If you want to make good decisions about conservation, it helps to know what goes on in your brain when you fall under the spell of some animal.

First, there are things that happen automatically. Long before you’re even aware of what you’re looking at, the mere picture of an animal sparks activity in the amygdala, two little knobs of tissue on opposite sides of the brain.



Save the menhaden

Sometimes it's the most pedestrian species that deserve our greatest attention. Take the humble menhaden, a small fish found off the eastern coast of the Atlantic. Pound for pound, more menhaden are caught off the coast than any other species, usually for use in pet food, animal feed and dietary supplements for people. That's trouble. Menhaden populations have fallen to record lows, with the number of fish surviving to one year at less than 10 per cent, according to the Pew Environment Group. As a lynchpin in the region's food network, that is putting stresses on species including whales, dolphins, tuna, eagles, osprey and striped bass (which support a fishery valued at almost \$7 billion, Pew says). Small wonder, then, that conservationists working to protect the menhaden often refer to it as the "most important fish in the sea."

The amygdala is mysterious. All agree that it's kind of a hub for assigning values to new information: is that something worth paying attention to? Is it good? Is it bad? Years ago most would have said it controlled fear and the response to it, but now it's clear that's only a part of it.

In one experiment, when subjects were shown line drawings of animals, the right amygdala reacted strongly. The experimenters suggested this makes sense in that the right hemisphere of the brain is specialized to detect and evaluate anything new. Animals are important, either as prey or predator, so why not have a brain centre dedicated to detecting them specifically?

A variation on this theme showed that humans, even preschoolers, are particularly good at picking snakes out in pictures, whether they're afraid of snakes or not. And even infants, who are—at least in the developed countries—unlikely even to have seen a snake, easily connect a fearful voice with a snake's image. Yet they show no fear themselves.

That doesn't suggest we are born with a fear of snakes, but the next best thing: that human brains are primed for them in some way. Spiders could probably be added to that list as well, and who knows what else.

So the human brain is good at picking out animals and paying special attention to some, but there's more. Cute is important, too. Many baby animals trigger the same protective, loving response that overwhelms humans when they see an infant. Large eyes, high foreheads and short muzzles do the trick; the same changes that transformed a distinctly rat-like Mickey Mouse in the 1928 cartoon "Steamboat Willie" to the much more lovable creature he is today. It's the same "evolutionary" process that changed the early 20th century Teddy bear from a snouty adult-looking toy to the cherubic version we have

today. But such features seem to attract only when they belong to something furry: praying mantises have large eyes, high foreheads and short muzzles, but fail to trigger warm parental instincts, at least among most people.

All the mental mechanisms I've mentioned so far are fundamental, products of a long period of evolutionary tuning of our brains. But there is a whole other, higher level of evaluation, which, rather than being automatic, allows for higher cognitive processes.

Beauty, size and ferocity are attributes that allow us to marvel at hummingbirds and sharks at the same time. Size and ferocity particularly are always a winning combination. Even the long-extinct *T. rex* will forever be popular, but its beauty is a little different: the beholder's eye is swayed by many factors, not the least of which is rarity. There aren't many among us who remark on the beauty of the common pigeon, starling or house sparrow, even though they are all quite striking birds. But the fact they're underfoot all the time bores us.

By the same token, raccoons and skunks were fine as long as they lived in the woods. The more mysterious, the better—hence the rumour that logging companies suppressed sightings of Bigfoot, knowing that if it existed, it would be a compelling flagship species.

In the end we all want conservation efforts to be directed at those living things that need them the most, whether they are charming or not. That choice must be made in the light of the best science. But at some level, decisions are going to be guided by how we react to animals, as well. When it comes to launching successful programs, human psychology is going to play a role. 🐾