

Too cute to die? Experts say we're too selective about species we choose to protect

BY TOM SPEARS, THE OTTAWA CITIZEN APRIL 22, 2012



A mother polar bear plays with two of her three cubs born in last November, at the Moscow Zoo, on March 22, 2012.

Photograph by: ANDREY SMIRNOV, AFP/Getty Images

For endangered species, it pays to be a large mammal with sad eyes that cuddles its babies. Glamorous animals, big predators and, above all, the extremely cute and fuzzy stand a chance of getting people to protect them and their habitats.

Ugly animals — as judged by human eyes — are far more likely to be left aside when humans draw up conservation plans. Anyone care to save Ontario's rattlesnakes?

Canadian ecology experts say such thinking mean we're in danger of re-shaping nature to beautify it according to human notions of what's pretty, saving the mammals but letting the reptiles and amphibians disappear. As for plants, they're barely even on the list of candidates for protection.

This thought struck Ernie Small a couple of years ago at a conference on endangered species.

Small is a veteran research scientist at Agriculture Canada in Ottawa. He's a plant specialist with a strong interest in ecology that doesn't confine itself to farms.

Confronted with this notion that we're selectively protecting species for all the wrong reasons, he

produced a research paper, recently published in a science journal called Biodiversity.

His article is called The New Noah's Ark, a reference to the Biblical story of Noah building a ship to save animals from drowning. But while Noah rescued everything in sight, Small says today's conservation is for "beautiful and useful species only."

There's broad support for "marquee and poster species," he writes: whales, pandas, polar bears, elephants.

We also protect commercially important species. Salmon stocks are important to us. Bluefin tuna are the object of efforts to prevent overfishing. And farmers are desperate to save the honey bee from whatever mysterious threats are wiping out colonies.

But that's where our efforts often stall.

"Aesthetic and commercial standards have become the primary determinants of which species in the natural world deserve conservation," Small concludes.

"Accordingly, the world's biodiversity is being beautified by selective conservation of attractive species, while the plight of the overwhelming majority of species is receiving limited attention."

And he says the losers in the competition for protection are mostly reptiles and amphibians, even though these — especially frogs and toads — are probably the most endangered groups of animals in the world.

Environment Canada couldn't provide any cost estimates for protecting individual species, but it can be big business.

The joint Canada-U.S. recovery plan for the whooping crane, for instance, costs the two countries a total of \$6.1 million a year now and will cost nearly \$125 million through 2035, in U.S. dollars. The costs cover everything from captive breeding (more than \$20 million) to \$162,000 for satellite telemetry (searching for habitat).

Meanwhile, many less spectacular endangered plants and creatures have no budget at all for conservation. That means no satellites to search for homes for the Lake Erie water snake.

Coca-Cola, meantime, will contribute \$2 million to the World Wildlife Fund over five years to protect polar bears, and will match consumers' donations up to a further \$1 million. But corporate donors aren't lining up to save toads.

In the front lines of conservation, Small's claim isn't a surprise.

Dan Brunton writes status reports on plants that are used to determine which species belong on Canada's Species At Risk List.

"Those funny little quillwort ferns that I study — those things are globally rare. And the total amount of federal and provincial money that's gone into the conservation might amount to \$20,000," he said.

Even that has mostly gone into paying for studies, not into concrete protection.

There are haves and have-nots among these plants (and animal species, too). The haves are lucky enough to live in national parks, where the staff have a legal duty to protect them under the National Parks Act. The have-nots live elsewhere, and they're on their own.

"On the flip side, look at the money that has been put into conservation of the Gulf of St. Lawrence population of beluga whales," Brunton says. "It's not even one per cent of the global population of beluga whales."

But he says political will has mobilized protection as if this were the world's whole supply of belugas.

Political winds, like real winds, blow differently in different places. It's legal to hunt and eat Arctic belugas, even though they are the same animal.

"Pretty stupid in my view," Brunton says bluntly. "One uncommon part of a very common species is getting millions of dollars. But they're cute and cuddly and they have ecotourism."

As for AgCan researcher Small, his first degree was a BA in psychology. He got out of the field, but hasn't lost the taste for wondering about human motivation.

Useful species will be selectively preserved -- "and things that are cute are certainly selectively preserved," he writes. "But also, people have other inclinations."

He set out to describe what attributes make animals attractive to humans. The successful candidate will exhibit:

Usefulness (providing humans with food, clothing or medicine);

Human-like traits, such as having a high forehead and expressive eyes and being a mammal, or at least a vertebrate;

Be large and fierce. For some reason we like dangerous animals, and are fascinated with their weapons, from teeth to horns. (Watch any kid in the dinosaur gallery.) Small thinks this may explain the fact that tigers are the kings of global conservation efforts;

It must live above ground, preferably in a family setting showing off the mother with adorable cubs or kittens (one Toronto conservationist calls such animals "the cuddlies");

It should not smell bad;

It helps to be warm-blooded;

Bright colours also help while being covered with scales, or a slimy skin, is bad;

Attractive animals eat "clean" food. We don't like scavengers and carrion-pickers;

Traits that are unhealthy in humans should be avoided. We have little urge to conserve animals with warts, bow legs, wrinkles (except for elephants), irregular teeth or a habit of drooling.

Plants have attributes that attract humans, too — big flowers, fruit, huge size (trees), decorative

foliage, and the ability to draw birds, butterflies, bees and squirrels.

Yet most animals are either too small for us to notice, and many are active at night.

“Overwhelmingly, most creatures are never even seen by humans,” Small says. These are the losers in the conservation lottery.

There’s even a buzzword in the nature business: “Charismatic megafauna” are the big, cool animals that bring in tourists, photographers and conservation dollars.

There are exceptions to the “cuddly” rules. The World Wildlife Fund found a previously unknown gecko in Madagascar that has public appeal on two fronts: Geckos can walk upside down on the ceiling, and this new-found lizard is weirdly camouflaged like chunks of tree bark.

Butterflies also elicit huge support, and the monarch is well-named, as the king of butterfly conservation.

“I don’t denigrate these campaigns, based on very attractive creatures,” says Small. “Especially the monarch. It’s extremely educational for kids, and politicians understand very quickly the appeal of these beautiful creatures and they’re willing to loosen the purse strings for them.

“When you get things that are ugly or obscure, or worst of all that are potential roadblocks to economic development, you’ll never get them to support that kind of thing.”

There are some shifts. Campaigning to protect the Suffield National Wildlife Area in Alberta, Nature Canada recently highlighted three small and relatively unknown rare plants there including the tiny cryptanthe and the small-flowered sand-verbena.

“We got kind of tired of large, attention-grabbing species always being the ones in the media and in campaigns,” said Ted Cheskey, the group’s manager of bird conservation.

However one prominent conservationist says focusing on the big “flagship” animals is the most efficient way to protect many species at once.

The key is that big animals require big territories, so saving the wolf or bear means protecting a large land mass, says Steven Price, the senior director for conservation at the World Wildlife Fund.

“If we’re capable of securing large habitat protection that goes a long way toward protecting that big predator, be it a whale or tuna or a wolf or a tiger,” then this large protected area will also preserve many small species.

“You can actually carry a whole system along with it.”

And protecting corridors that connect to other wilderness areas creates a network of good habitat in different areas.

You can’t save every species one at a time, he argues, “so we have to be taking a habitat and system approach.”

The big, photogenic animal is also a better fundraiser, he says. People will give money to help tigers, but not worms. "It's fair enough to be using the flagship."

But a University of Ottawa biologist says saving the flagships only partly works in Canada.

Save every polar bear, says Jeremy Kerr, and we'll protect the Arctic and Hudson's Bay coastlines, but relatively few species overall.

The "biodiversity hot spots" are in southern Ontario, the Okanagan, southwestern Alberta and Fraser Delta, far from polar bears and mountain lions, he said.

"This is a big topic," he said. And he praises the federal Species At Risk Act as having the potential "to protect the little things that run the world."

People won't care if a small carrion-eating beetle disappears, he said, but such species are as important ecologically as the big furry animals, he and others believe.

Environment Canada says it favours a broad approach to protect sensitive areas. It responded to questions by email:

"Priority areas will be home to many species at risk, for example, the tallgrass prairie and aspen parkland region of Manitoba, where habitat protection efforts benefit plant and bird species at risk, such as the Small White Lady's-slipper (*Cypripedium candidum*) and Sprague's Pipit (*Anthus spragueii*). As well, this means that habitat improvements in a sensitive area for one species (e.g. restoring shoreline vegetation) will always benefit several species at the same time."

But without specific support for the small and unlovely species, Small warns, "the world is destined to become a much poorer place."

tspears@ottawacitizen.com

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