

Stephen Herrero – Scientist, Advocate, and Wilderness Defender

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Stephen Herrero, recipient of a
2011 Wilderness Defenders Award.
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Recall of the Wild

There are times when bears in Alberta, particularly grizzly bears, seem to have very little going for them. But there is one thing that Alberta bears have had in their favour for many years, and that is Dr. Stephen Herrero. Stephen's contribution to our understanding of bears and their behaviour has been unparalleled in North America, probably in the world. His renowned book *Bear Attacks: Their Causes and Avoidance* was first published in 1985 and has been in print ever since. A second revised edition was published in 2003 (see the review of the second edition in the June 2009 issue of *WLA*).

We have a lot to be thankful for that Stephen decided to settle in Alberta and to pursue his studies into bear behaviour at the University of Calgary. It was a thrill to sit down and talk to the man himself about how he got to where he is today.

The Road to Alberta

After graduating in 1967 with a PhD in psychology/zoology from the University of California, Berkeley,

Stephen and his wife decided it was time to travel. "Not really knowing where we would end up, we packed the three kids in a Volkswagen bus and headed up along the west coast," Stephen recalls. "You can imagine leaving Berkeley – full

"I'm mainly a management-oriented biologist...I love to see things implemented and I love to see things ultimately applied to conservation." – Stephen Herrero

beard, long hair – lots of involvement in conservation, anti-war activities in the States."

Fate, it seems, was leading them inexorably towards Alberta. Heading towards Glacier National Park, Stephen remembers "reading in the paper that two young ladies had been killed by grizzly bears in Glacier National Park and no one seemed to know the reason why. So we decided to detour and go to Banff instead."

Nobody seemed to have any explanation for the recent bear mortalities. This was the hippie era, and some people suggested the bears had been fed LSD and this was the reason for their behaviour. Others thought it was due to weather. But, with his background in zoology and psychology, Stephen's thoughts took him a little deeper. "As we were driving along, my mind got more and more interested in the question of why these incidents had occurred," he remembers. "What was the nature of bear behaviour that they would kill people like this? Animal behaviour was my area of expertise, though I'd never worked with bears. Here seemed a question that was worth pursuing."

So Stephen and his family ended up in Banff and discovered to their surprise that there was a university in nearby Calgary. He jokes: "It wasn't much of a university, but, hey, it was a university!" The University of Calgary presented Stephen with two choices. Psychology offered Stephen teaching work but the Biology department offered him a post-doctoral position and the opportunity to

spend two years researching bears: his choice was an easy one. Stephen did end up teaching some psychology classes, talking about behaviour of animals in their natural environment. “That was how I got started on bears,” says Stephen today. “There was a situation out there that seemed like it needed answers, and I thought I had the background to pursue those answers.”

Bear Communication

Many of the bear safety measures that we take for granted today – bear-proof garbage containers, carrying pepper spray when in bear country, travelling in groups of four or more – derive from Stephen’s research. These precautions may seem obvious to us today but, like all of the best ideas, somebody had to think of them first.

Stephen began to unravel the mysteries of bear behaviour by looking at the bear encounter data which already existed. “Each individual park and some wildlife management agencies had really good data but no one had tried to synthesize it and see what the common factors were,” he says. “So I started doing that.” But these records would only take him so far: “I figured that if all I ever knew about bears were paper records, I’d probably end up with some pretty stupid conclusions.” So he wrote a research proposal to the Canadian Wildlife Service to carry out behavioural research on grizzly bears, “watching bears interact and seeing how they communicated with one another and then seeing how much of that was relevant to their interactions with people.” This approach was a departure from normal research practices. Stephen smiles when he says: “A self-respecting biologist at the time didn’t study people. They only studied animals!”

In fact the Canadian Wildlife Service turned him down, citing his lack of experience with these daunting predators. “I thought about it and thought ‘that actually makes sense’,” Stephen remembers. Instead he began behavioural studies of black bears in Jasper, focusing on the town’s unfenced garbage dump. “I could identify 40 different individual black bears by their colouration, marking, scars,” he says. “It was the perfect place to see how they communicated with one another, how often they physically

contacted one another and even how they interacted with people. There were lots of people around – there were the dump attendants, there were visitors every night, there was a little viewing platform set up.”

Within a few years he put this study of black bear behaviour into a broader context and began to study the ecology



Stephen’s interest in wildlife was clear from an early age.
PHOTO: S. HERRERO

of grizzly bears in Banff National Park. A striking pattern emerged from relating the data of human-bear encounters to his studies of bear behaviour around garbage: “The primary factor that was associated with 12 fatal attacks in Yellowstone, Glacier National Park and Banff was bears being used to hanging around people, becoming habituated and becoming more and more aggressive at getting at people’s food and garbage.”

Habituation was the key to understanding the 12 fatal attacks and this conclusion allowed Stephen to make recommendations to prevent future encounters between bears and people. Tragically, it took a while for anyone to listen. “In Banff it took until 1980 and the fatal attack that occurred at Whiskey Creek,” he says. “It took until then to allocate the money and to develop and

implement a bear-proof garbage system. That was done working conjointly with Haul-All, an Alberta company that has developed bear-proof containers that are now sold throughout North America.”

This is an important theme throughout Stephen’s career. Carrying out the research and analyzing the data is just the first part of the job. Taking that research and applying it to make practical management and conservation recommendations is the next step and one that some scientists omit. “I’m mainly a management-oriented biologist,” Stephen points out. “I love to see things implemented and I love to see things ultimately applied to conservation.”

This is nowhere better illustrated than in Stephen’s ground-breaking 1985 book, *Bear Attacks: Their Causes and Avoidance*. The book was very well-received at the time and has since sold 115,000 copies. “I think I know why,” says Stephen. “It’s written first hand and at the same time it offers some new scientific insights and helps people understand bears and safety around bears.”

Stephen’s bear education work did not end with the publication of his book. With four colleagues, he formed the Safety in Bear Country Society, and spent a further five years putting together a video called *Staying Safe in Bear Country*. The video has become essential viewing for anybody who travels in bear habitat. “It’s broadened our communication network dramatically,” Stephen says. “We did that partly to get all of the agencies in North America on the same page. They were giving all sorts of different advice to people.” The video has also been translated into several other languages, including German and Japanese.

Science and Advocacy

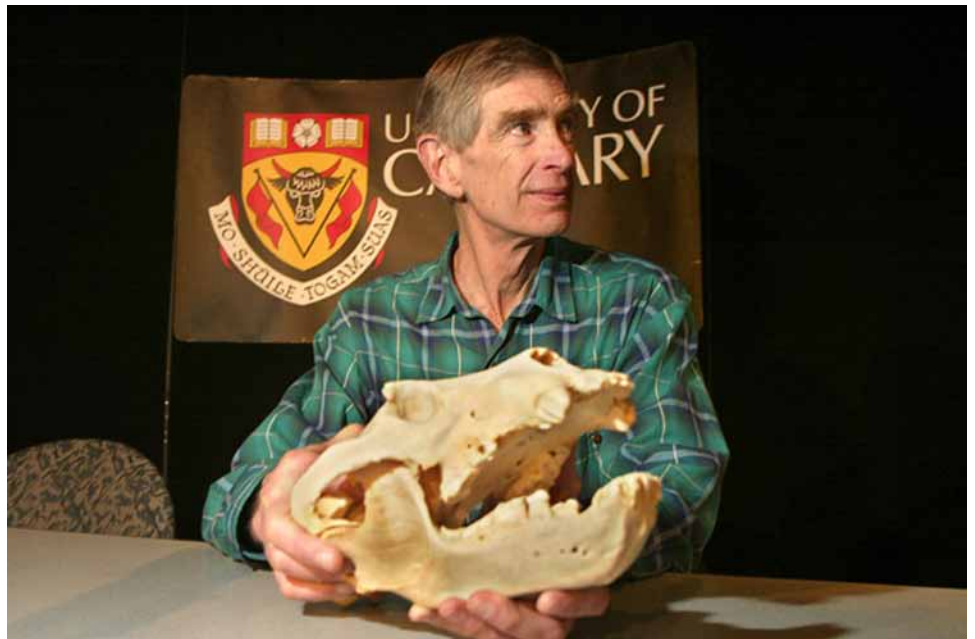
Another important theme of Stephen’s career has been a willingness to speak out and to advocate on behalf of his research subjects. Again, this is something that is not universal amongst scientists. “I’m a strong believer in science and evolution as a science,” says Stephen, the passion flaring in his eyes. “And I’m willing to

speak out on that.”

Stephen becomes animated as he recalls a major development proposal near Lake Louise in the 1970s. Six-story time-share condominiums were planned on the side of the highway where the ski hill now is. The development would have involved private condominiums and a major resort industry. Stephen spent a year of his life battling these proposals and ultimately the fight was a successful one. He remembers fondly the announcement from Jean Chrétien, then the Indian Affairs and Northern Development Minister, that the project would not be allowed to proceed. “One of the greatest days of my life was being at a press conference with Jean Chrétien... and hearing him say that they’d rejected the proposal because it wasn’t in the public interest and it didn’t give adequate attention to wildlife and other concerns.”

When it comes to advocating for Alberta’s grizzlies, Stephen refers to the successful Yellowstone recovery program: “Progress that they’ve made in the US for the recovery of the grizzly bear population in the lower 48; that [is something that] has largely resulted from access management.” But, without the framework of endangered species legislation, it is hard for Stephen to see grizzly recovery succeeding in Alberta: “I wish it weren’t true but to manage access in areas when you don’t have a legislative mandate to protect species like grizzly bears is exceedingly difficult.”

Public support for bears is necessarily a huge part of reversing Alberta’s stalled recovery process. “The only magical solution is to get as many people on side as possible and wait for the right moment,” he says. An excellent example of the “right moment” Stephen talks about was found in the efforts in the late 1990s to oppose a major new resort development near Mount Shark in Kananaskis Country. Stephen, representing the Eastern Slopes Grizzly Bear Project, visited the offices of then-Environment Minister Gary Mar. While talking to the minister’s assistant, Gary Mar himself dropped in, so Stephen began a quick summary of the issue.” Mar promptly interrupted Stephen’s introduction to tell him “you don’t need to tell me about that. I remember back when I was in 6th grade and you came and talked to my class about it!” Mar ended up turning down the development and instead designated a new provincial park.



Stephen has had a long and fruitful association with the University of Calgary. The skull in this photo belonged to an elderly female grizzly; the teeth are battered and worn and some canines are missing entirely. She was killed at the ripe old age of 24 in a fight with wolves over an elk carcass.

PHOTO: © UNIVERSITY OF CALGARY

Swift Foxes and More

Though Stephen Herrero’s name is synonymous with grizzly and black bears, he has worked with other bear species around the world, and his work has by no means been restricted to just ursids. Stephen has coordinated research into cougars and caribou and was also closely involved in the early days of the swift fox reintroduction in Alberta. Nearly 40 years after the species was wiped out in Alberta, Cochrane’s Myles and Beryl Smeeton began breeding swift foxes in captivity with a view to reintroducing them into their former habitat. After the controversies surrounding his bear work Stephen thought that swift foxes would be “just fun to work with.” The local ranching community supported the project as did First Nations. “But the Alberta Government; that was something else.” The ignorance about these small, cat-sized foxes was startling. Apparently, only a last-minute intervention from an assistant prevented one minister from issuing a press release opposing the swift fox reintroduction because the pint-sized foxes would prey on cattle.

By 1980 a number of swift foxes were housed in pens at their release site to be acclimatized prior to their imminent release. “By golly, if the Alberta government didn’t seize them all, which meant an order for us to keep them in

their pens and not release them,” says Stephen, ruefully shaking his head. “We had to hold them on site for a year and a half.” He pauses then adds with a smile, “now some of the foxes escaped along the way, accidentally... Eventually they were all released.”

The Future for Alberta’s Grizzlies

Stephen is now officially retired from the University of Calgary although he still delivers guest lectures and keeps some of his research going (see the June 2011 issue of *WLA* for a brief summary of his latest published research on black bears). Talking to him today, his profound respect for his research subjects comes through; he exemplifies the understanding that with the privilege of studying such spectacular creatures as grizzly bears comes the responsibility of advocating on their behalf. Stephen muses about the importance of keeping large predators such as grizzlies on the landscape in Alberta. In his native California, at one time there were 10,000 grizzly bears, but by 1922 the last one had been killed. “We could certainly do that in Alberta,” he stresses. “There’s no question we have the technological ability to do it.” But are we wise enough not to? “I think that defines, ultimately, what kind of society we are.” 🍌