

Piecing Together Fragments of the Past

Two researchers, one in Nova Scotia and one in England, are helping us understand the present by reconstructing the past

By Rachel Cooper ('89)

Stephen Flemming ('84, '88) and Greg Edgecombe ('85) both study how the past influences the present, but they work within very different timeframes.

For Flemming, as executive director of Sherbrooke Village on Nova Scotia's Eastern Shore, the timeframe is measured in decades. For Edgecombe, a merit researcher in the Department of Earth Sciences at the Natural History Museum in London, England, the timeframe began millions of years ago.

"In my work, written history is meaningless," Edgecombe says. "We are left with the genetic code, bits and pieces of information from fossils, and comparative anatomy." A palaeontologist, Edgecombe uses the tools of geology and biology to study the tree of life.

"About half my work is on living animals," he says. "To understand and interpret the anatomy of fossils, you need to understand their modern relatives. When I look at a fossil, I try to see it as it would have been in life. And now and then you get a Eureka! moment, when you almost want to say to someone, 'Bring me the tree of life – I have a branch!'"

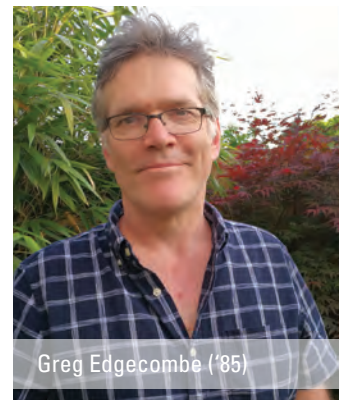
Immersed in history

In Sherbrooke Village, written history underpins the experience that brings this late-Victorian Nova Scotian village to life. Unusually for such a museum, almost all the buildings are on their original foundations; the others were moved from within the community.

"A living history museum is about being immersed in history," Flemming says. "All of our interpreters are in



Stephen Flemming ('84, '88)



Greg Edgecombe ('85)

costume and in character." The visitor's experience is framed as "Step into 1867," the year of Canada's Confederation, when Nova Scotia was prosperous and therefore reluctant to become part of a new nation. "We tend to think tough decisions are always in our time," he says. "Tough decisions are in every time. We try to challenge visitors to consider the aspirations for this country then and to reflect on how well we are doing."

Yet Sherbrooke Village does not dwell only in the past. For its 50th anniversary in 2020, the museum established RICHES, the Rural Institute for Cultural Heritage and Environmental Sustainability, to help grow the cultural sector in eastern Nova Scotia. Flemming also heads the organizing committee that is bringing North America's first whale sanctuary to Port Hilford near Sherbrooke Village.

Before joining Sherbrooke Village in 2016, Flemming had a 25-year career with Parks Canada, most recently as superintendent of Elk Island National Park in Alberta. An early interest in wildlife and conservation brought him to Acadia for a BSc and later an MSc in biology.

"The thing about Acadia – obviously I'm biased here –

is that relationship you have with the professors and your fellow students. It has such depth that it broadens your perspective,” he says. “In the biology department, we could be talking about science, but we’d wander over to talking about cultural things, then wander back. I attribute a large part of my perspective on weaving back and forth between science and culture today, almost like breathing, to Acadia.”

Studying the tree of life

Growing up in New Brunswick, Edgecombe was a keen collector, not only of natural history objects such as fossils and rocks, but also of cultural items such as coins and stamps. “I was always interested in classification, so I was trying to find out how these collections were meant to be arranged,” he says. “It’s not surprising that I’ve spent my career working in museums and as a systematic biologist.”

Edgecombe uses different toolkits to work out evolutionary relationships and find common patterns in the different layers of evidence. “Trying to solve the shape of the tree of life is like a detective story when the trail has gone really cold. The branch points between different living lineages often happened hundreds of millions of years ago,” he says. “Palaeontology is one of these toolkits. Comparative anatomy is another, and molecular biology is another.”

In March of this year, Edgecombe’s textbook, *The Invertebrate Tree of Life*, was published by Princeton University Press. He and co-author Gonzalo Giribet spent the last three years putting together this textbook on animal evolution seen through the paradigm of the tree.

He credits Acadia geology professor Reg Moore with setting him on his career path. “He was probably the most influential person in my education and my decision to

embrace scientific research,” he says. Moore had built large collections of fossils that were housed in the basement of the science building. When Edgecombe became interested in the fossils, Moore offered him working space and the keys to the lab.

“Reg Moore’s attitude was essentially, ‘Open up any drawer, find anything that intrigues you, and follow it wherever it leads.’ That’s the first time in my education that I’d had that opportunity, and it was transformative,” Edgecombe says. “You could see all these doors opening and all these roads ahead of you. You could follow these questions anywhere. I found that utterly mesmerizing, and I’m extremely grateful to him for giving me that opportunity, for entrusting me to work in the collection.”

A broad way of thinking

Flemming’s Acadia studies also introduced him to the hands-on, experiential learning he promotes today. “As a student, you were thrown into all kinds of things,” he says. “Among them was bird-banding on Bon Portage Island, which was a powerful experience” (see Acadia Reminiscence). He now works on what he calls deep experiential tourism as a way to preserve the cultural flavour of rural Nova Scotia while boosting its economy, which is where the whale sanctuary comes in.

Besides being the first in North America, it will be the first educational whale sanctuary anywhere. “There’ll be live feeds to schools and universities throughout the world,” he says, “and it will be set in a community that wants to be global while staying rural. That’s the kind of thing we’re trying to do here, and it all stems back to that mix of experiences I’ve had: running national parks, but also running living history. It goes back to Acadia, and that liberal arts broader way of thinking. All those things are linked together.”

Acadia Reminiscence



“I would often hitchhike home to New Brunswick, but also out to do field work. I’d go off by myself, with a tent and my compass and so on, and my collecting bag and hammer. And I’d be out on a roadside, then walking through pastures to get to some field site so I could go collecting. I’d be out there in the bush by myself for two days collecting. In the modern world, in terms of workplace health and safety, this would not fly. But this was the 1980s, a very different world.” – Greg Edgecombe

“I loved bird-banding on Bon Portage Island and banded the entire time I was there. Later on, I wound up getting a master’s banding licence and for years banded birds in Gros Morne National Park – I banded over 10,000 birds at their banding station. And that comes back to the hands-on experience at Bon Portage. There was lots of biology background, and the professors guided us, but we learned by doing.” – Stephen Flemming