DANCE

Rhythm and reason

Nicola Jones witnesses a meeting of dance and ecology.

At a time when many scientists are struggling with how best to communicate with the public, it is refreshing to see the problem approached from the heart. The Canadian dance project *Experiments*, which ran in Vancouver at the end of November and may tour elsewhere, brings together four dancers and four local ecologists to explore synergies between their work.

Choreographer Gail Lotenberg of LINK Dance Foundation aims to convey the human side of research through the performance. She prepared by taping hours of conversations with scientists she met through her husband, Alejandro Frid, a marine biologist at the Vancouver Aquarium Marine Science Centre. Video clips of the interviews — revealing what the scientists do and how they feel about it — are projected onto the back wall of the stage between the dances.

In one piece, the music samples the monologue of marine ecologist Anne Salomon at Simon Fraser University in Burnaby, British Columbia, on the interconnectedness of all things. In another, behavioural ecologist Larry Dill, also at Simon Fraser University, appears on stage in person — complete with Darwinesque beard and white lab coat — observing a dancer's movements just as an ecologist might observe wildlife.

Elements of the dance are inspired by both the process of science and the collaborators' specific research. Lotenberg peers at

**Experiments:
Where Logic and
Emotion Collide**

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the audience with a flashlight to suggest curiosity; a dancer builds a tower of Styrofoam blocks to match a smaller model. The set pieces are beautiful but often rather literal: two

dancers dressed in pink and orange interlink to suggest coral and algae in symbiosis; the stage is lit in honeycomb patterns during a piece on bees; dancers in flowing greens and browns appear after Salomon's video describing her work with kelp forests.

Some more-interpretive moments are more revealing. After former ecologist and sculptor Lee Gass tells in a video of his delight at discovering a mathematical representation of the territorial defensive behaviour of hummingbirds, the dancers ponder and reposition cubes placed on stage as if interacting with data points on a graph. And the audience members become part of the 'experiment' when their reaction to a startling event is filmed and played back.

Lotenberg sees many similarities between scientists and artists. Both rely on a pivotal moment of inspiration, she says: "Scientists call it an 'aha' or 'eureka' moment." And the disciplines share rigour: "we repeat, repeat, repeat", scientists to get statistical significance and dancers to rehearse. But these links come across more powerfully through Lotenberg's words than through the dancing.

Mark Winston, a former bee researcher now at the Morris J. Wosk Centre for Dialogue at Simon Fraser University, has worked with Lotenberg before and encouraged the project from its inception. He found taking part in *Experiments* a deeply moving and collaborative experience. Salomon, too, was inspired by the interaction — she says it gave her the idea for a paper on marine conservation. But, she adds, it wasn't like a scientific collaboration in which co-authors all have control: "We were like a bucket of paint to a painter."

Gass says that the project clarified his thinking about the human side of science. He had assumed that in Lotenberg's subtitle, logic referred to science and emotion referred to dance, but later realized that Lotenberg probably meant something else: "Science is where logic and emotion collide." ■

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Coral symbiosis comes alive in *Experiments*.

on mammals, for instance. It is the result of an embarrassment of riches, of course, especially in groups such as the whales, for which recent fossil discoveries have illuminated ancestry. Switek, a science writer and blogger, has clearly done a lot of homework. He demonstrates the replacement of old ideas of simple, almost linear evolutionary pathways — such as the classic early picture of horse evolution — with the complexity of modern phylogenetic reconstructions. The wealth of co-existing horse taxa more than 15 million years ago contrasts starkly with the poverty of horse diversity today, for example.

Switek's chapter on human ancestry is one of his best. The pace barely slackens, even as the number of hominin genera mount up. Alas, space seems to have not permitted mention of the awesome *Gigantopithecus*: not a hominin, perhaps, but the tale of its discovery, as 'dragon bones' in an apothecary's shop, would have fitted the book's style nicely. This giant ape, and others nearer our line, perished. Our own species thrives — for now. It is an accident of time and place, as Switek underlines. *Written in Stone* is a fine guide to the four-dimensional tapestry of life — the bony bits of it, at least. ■

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