



Kyle Larson on a research trip to Nepal.

LAURENT GODIN

18 metres or so. And Searle, now aged 61, bikes to work every day. He also climbs, swims and surfs. “You can’t climb mountains,” he says, “if you’re a couch potato.”

One summer day in 1998, Cardelús was dangling from a rope some 24 metres above ground, near the top of a tree in the Costa Rican jungle, when two howler monkeys began to make aggressive motions. Crouched about three metres away, they were shaking branches and baring their teeth with arms outstretched, ready to leap. “I thought, ‘Oh my God, here they come,’” she says. Then she heard “an ancestral guttural sound” — not from the two monkeys, but from her husband, who was working nearby. The monkeys scattered.

Cardelús — who no longer climbs when monkeys are nearby — has experienced many such close calls that include run-ins with snakes, ants, bees and tarantulas (see ‘Views from the other side’). “Each time you climb a tree for the first time, you have to be prepared to evacuate within 15 seconds,” she says. “It’s always exciting getting into the canopy. And it’s just as euphoric to get to the ground.”

Wildlife is not the only source of heart-thumping adventure. One afternoon in the spring of 2011, Kyle Larson crested a mountain pass in Nepal to discover a steep, nearly sheer descent buried in waist-deep snow. The team could see neither the trail nor what they were stepping on. Last year, he arrived in the country’s Makalu region on the heels of a

busy storm season that had dumped metres of snow on the region. Piles of snow reached the rooftops, and trekking was treacherous. “Trying to walk down through that was scary,” he says. “There were lots of bruised knees and falls.”

A certain level of psychological preparation is crucial for working in extreme environments that are, by nature, full of surprises. And that process often starts before the expedition begins. For Elliott, the idea of squeezing through an extremely tiny space presented the first mental obstacle. When Lee Berger, the palaeoanthropologist who recruited Elliott and her fellow cavers for the South Africa excavation, told them that they would need to fit through a small gap, “all of us ran around our houses measuring furniture and stuffing ourselves under it”, she says. She could wedge herself into the space just by expanding her lungs.

As she applied, Elliott worried that she wasn’t qualified enough or that she had screwed up the Skype interview. She continued to doubt herself even after arriving on site. On the first day of reconnaissance, she looked into the 12-metre-long vertical chute that the team was to descend. If someone were to get hurt, medics would have to tend to the injured person until she healed enough to get out on her own. “Psychologically, that was quite trying,” she says. “I remember looking down this shark’s maw of rock, and you can’t see where you’re going because it’s not a straight line, and thinking, ‘Oh, gee, perhaps I’ve miscalculated my own skill set.’”

Because academic courses typically do not cover the ins and outs of survival, Elliott relied instead on years of hands-on experience and prior training that had taught her to remain calm enough to deal with unexpected circumstances. Long before she took on the caving job in South Africa, she had worked as a field guide for an adventure-tour company in the Rocky Mountains and earned a certificate in wilderness first aid. Both equipped her with survival and decision-making skills.

It is impossible to predict every emergency, she says. But one can learn to think quickly and clearly in any situation. “What you can prepare for,” she says, “is the mental stability to say, ‘OK, what do we need to do next? Who needs to do it?’”

Elliott also advises young researchers to pursue all of their life passions, even if they seem completely unrelated. She started out studying veterinary medicine before earning a PhD in anthropology and landing the career-changing excavation post in South Africa. “My take-home message is, don’t fuss if your career or life path appears to be a little bit circuitous,” she says. “You never really know where any given skill set or experience might lead you.” ■

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## TRADE TALK

### Science integrator



*Lana Gent is a director of science at the American Heart Association in Dallas, Texas, where she coordinates networks of volunteers, the drafting of science guidelines for emergency medicine*

*and the production of instructional videos on first aid.*

#### What do you do?

I help to gather input from resuscitation scientists around the world who evaluate the scientific evidence that goes into the creation of our resuscitation guidelines. I’m not usually the one who is giving the talk or is the first author, but it is my team that ensures that those experts are able to do the presentation or create the publication.

#### How did you learn about this job?

Our lab was in a crunch for money and that made me think about what I wanted to do. Do I continue on this pathway of being a traditional lab scientist? Colleagues were encouraging me to be a medical-science liaison — a professional who teaches physicians how new medicines work — and I was going to interviews. During that process, I was contacted by a recruiter representing the American Heart Association. I didn’t think I was the best fit; I didn’t have a resuscitation-science background or management experience, but the recruiters knew that I had transferable skills. I convinced everyone that if I could learn stereotactic brain surgery in mice, I could learn resuscitation science.

#### Why is this job right for you?

No one goes to school for the type of position I have. You wear a lot of hats. The hiring manager could see that I took initiative and was passionate. I had shown that I could take on new challenges and bring people together.

#### What has the job taught you?

I had to learn to be resilient and inquisitive and not walk along just one path. Sometimes as scientists we pride ourselves on being contemplative, and the greatest skill set here is to simplify information and to be quick on your feet. ■

#### INTERVIEW BY MONYA BAKER

This interview has been edited for length and clarity. For more, see [go.nature.com/iysud](http://go.nature.com/iysud).