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# ALUMNI PROFILE: MARGARET LOWMAN

Dr Margaret (Meg) Lowman's (PhD 1983) email signature encourages you to 'Enjoy nature!!' - An attitude she has adopted throughout her career in canopy research and conservation advocacy.

Dr Lowman earned the nickname 'Canopy Meg' by sharing her research into the world's rainforests with children via a distance learning program. Now the Chief of Science at the California Academy of Sciences, Dr Lowman spends more time communicating the importance of forest conservation than dangling from a rope. But as she says, "The stakes are high: saving forests and promoting forest restoration is critical for life on Earth."

**You completed your PhD a hemisphere away from your home in the USA. What brought you to Australia?**

I grew up in rural New York, so did not travel much as a kid. To my surprise, I applied and received a scholarship to study rain forest trees at Sydney University. My mom cried (because it was so far away) but it seemed like a lifelong dream to live and study in an English-speaking country that contains rain forest and unique critters as well!

**What was the focus of your research here?**

When I arrived at Sydney Uni, I was amazed that no one was studying rain forests. It seemed very daunting. I decided to look at leaf longevity - I knew that temperate trees hold their leaves for six months, but what about tropical leaves?

Once I figured out my hypotheses, my advisor - Peter Myerscough, said that I would need to climb the trees to reach the foliage. I was horrified - could I train a monkey, or use binoculars, I wondered? Instead, I found the Sydney University Caving Club whose members

taught me to climb. I sewed a harness and welded a slingshot - and drove north to Queensland to find rain forests!

I guess after that I never looked back (or down!). Once I was airborne, I discovered the millions of creatures that live in the tops of trees. It was an unexplored biodiversity hotspot

**What are some of the challenges and rewards of working up in the trees?**

The rewards include being at the forefront of scientific discovery; seeing some amazing forests and places in the world; working on creating new tools to explore the canopy; and seeing an amazingly complex ecosystem. The challenges are many - including the amount of perspiration, insect bites, and leeches, as well as the enormous threat of forest degradation, which I observe in every corner of the planet.

**You are very active in science education, outreach and writing.**

**Why is it important to you to engage people outside the scientific community?**

I strongly believe that scientists need to be role models for the next generation of scientists, and we also need to educate the broader public about important science issues. Trees are essential for life on Earth. They not only produce energy, but are also important to conserve water, prevent soil erosion, provide homes to millions of creatures, source medicines, produce food, generate building materials and store carbon.

Northern Ethiopia has less than 5% of its forest left - we need urgently to make a difference there. I have written a



children's book called *Beza: Who Saved the Forests of Ethiopia, One Church at a Time*. For every English copy of *Beza* sold, a version written in Amharic (Ethiopian language) will be distributed free to an Ethiopian child. I have written several other popular science books too - *Life in the Treetops* talks about my life and work in Australia; and *It's a Jungle Up There* was coauthored with my two boys who often accompanied their Mom into the canopy.

**What is the California Academy of Sciences responsible for? And what is your role as Chief of Science in the organisation?**

I am the external voice for science and sustainability. The Academy's mission is to 'explore, explain and sustain life on earth', which is really relevant for our children's future. It is one of the five largest museums in the world, with over 45 million biodiversity collections.

We are hoping to inspire and re-invent some of the conventional ways that scientists work. It is no longer adequate for our staff to discover new species, publish technical articles and add to our world-class collections. We recognise that research needs a sustainability component. In other words, how does this research improve the quality of life for the next generation? And how can we use this research to educate policy-makers and inspire solutions?

Scientists have increasingly quantified the trends of extinction, invasive species, climate change and the added expenses that our children will face because of current global changes - at the California Academy we want to be part of sustainable solutions.