Sam Wood, School of Plant Science, UTAS

How Old Are Old-Growth Forests?

What do you love about Environmental Science?
I have always loved the outdoors and exploring the amazing landscapes of Australia and the world. My career in Environmental Science has enabled me to combine this passion for the outdoors with the challenge of unlocking some of the mysteries of the natural world.

I have conducted research in some truly amazing places. At university, I looked at the effect of past glaciers on Mt Kosciusko, the movement of river bends on the Murray River and carbon storage in the beautiful Spotted Gum forests of the NSW South Coast. As a researcher for Forests NSW, I studied tree water use on the Liverpool Plains, mine-site rehabilitation in the Hunter Valley and carbon storage in eucalyptus plantations all over NSW.

Now I have moved to Tasmania and spend my time conducting research the remote landscapes of the Wilderness World Heritage Area and the old growth eucalypt forests of the Styx Valley. As part of this research, I even got to participate in a field-week in the forests of Argentina and a week of research in the wet tropics of Northern Queensland!

What does your current research involve?
I am currently studying the vegetation dynamics of the rainforests, eucalypt forests and buttongrass landscapes of south-west Tasmania as part of a PhD research project. These landscapes are shaped by a long history of fire and I am interested in how these vegetation patterns change over time. I am using aerial photographs from the 1940's, 1980's and 2008 to see if I can detect whether rainforests are moving into the buttongrass plains or vice-versa. I am also using tree-rings to investigate the age and fire history of Tasmania's old-growth forests. Amazingly, we do not know precisely how old our world famous old-growth forests are, and my studies will provide the first accurate estimate of their true age.

What did you study at university?
I studied Resource and Environmental Management at the Australian National University in Canberra. It was the perfect degree for me because the first year was very general and you could specialise in whatever interested you in the later years. I was exposed to all aspects of Environmental Science in my first year, such as botany (plants) and zoology (animals); geography and geology; the evolution of the universe and the earth; and human geography. I eventually specialised in plant ecology and spatial sciences (mapping), which led to a major research project focussed on mapping carbon storage in eucalypt forests.

Where did you work after finishing university study?
Before doing my PhD, I worked for three years as a researcher for Forests NSW. It was great to put all the skills and knowledge I obtained at university to practical use. I worked on a diverse and interesting range of projects that were aimed at using trees to solve salinity and water problems in dryland areas, establishing plantations on abandoned mine-sites, monitoring and tracking pygmy possums, weighing entire trees and forests to calculate how much carbon they hold, and even working out how long paper and wood lasts in rubbish tips.

What are you hoping to do in the future?
As you can see, my short research career in Environmental Science has included an incredible range of fascinating projects in some of the most incredible landscapes in Australia and overseas. I hope that in the future I can to continue to combine my love for the outdoors with my passion for solving environmental problems through scientific research.