

BRYONY



HORTON

PROFILE

I am a terrestrial ecologist with a strong interest in ecosystem function who delivers high quality strategic management and biodiversity conservation outcomes.

EDUCATION

Doctor of Philosophy 2006 – 2011, School of Land and Food, University of Tasmania
Certificate III Conservation and Land Management (Natural Area Restoration) 2005, TAFE
Bachelor of Environmental Science (First Hons) 1998 – 2002, University of New South Wales

EXPERIENCE

Biodiversity and Wildlife Project Officer 2015 – current, NPWS Office of Environment and Heritage NSW
Project Officer (various roles) 2011 – 2014, NPWS, Office of Environment and Heritage NSW
Environmental Policy Researcher 2010, Arcadia Fund, UK
Senior Environmental Consultant 2007 – 2008, Coffey Australia, TAS
Project Officer (World Heritage Area Vegetation) 2007, Dept. of Primary Industries and Water, TAS
Bush Regeneration Supervisor 2005 – 2006, Sydney Bush Regeneration Co., NSW
Botanical Consultant 2004 – 2005, Anne Clements & Associates, NSW

ACTIVITIES

Manage and implement conservation projects, including threatened species reintroductions and recovery
Research and monitor biodiversity and wildlife conservation and management in NSW national parks
Terrestrial and marine wildlife regulation including licencing, and incident management
Provide expert advice, particularly eucalypt forest heath and threatened fungal ecological communities
Participate in scientific community through societies, communication and student supervision

SELECT PUBLICATIONS

Horton, B. M. et al. (2016) An assessment of ectomycorrhizal fungal communities in Tasmanian temperate high-altitude *Eucalyptus delegatensis* forest reveals a dominance of the Cortinariaceae, *Mycorrhiza* doi:10.1007/s00572-016-0725-0

Steinbauer, M. J., Sinai, K. M. J., Anderson, A., Taylor, G. S. and **Horton, B. M.** (2014) Trophic cascades in bell miner-associated dieback forests: Quantifying relationships between leaf quality, psyllids and *Psyllaephagus* parasitoids, *Austral Ecology* 40(1): 77-89

Horton, B. M. et al. (2013) Temperate eucalypt forest decline is linked to altered ectomycorrhizal community mediated by soil chemistry, *Forest Ecology and Management* 302: 329-327

Horton, B. M. et al. (2011) Crown condition assessment: An accurate, precise and efficient field technique with broad applicability to *Eucalyptus*. *Austral Ecology* 36: 709-72

Tedersoo, L., Jarius, T., **Horton, B. M.** et al. (2008) Strong host preference of ectomycorrhizal fungi in a Tasmanian wet sclerophyll forest as revealed by DNA barcoding and taxon-specific primers, *New Phytologist* 180(2): 479-490

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Motivation and capacity to serve on the Ecosystem Science Council

1. Hold a *shared vision* with the ecosystem science council

To effectively contribute to the ecosystem council, I think it necessary that members share the same vision and values represented by the council. I believe that ecosystem science should be instilled in environmental management and be valued by the community. My work has allowed me to see the result of broken down ecosystems, where functions and processes are no longer intact, where biodiversity is lost and ecosystem health declines. I know that ecosystem health is fundamental to our existence and wellbeing, that its management is challenging, and the risks of mismanagement are great. It is therefore critical that we learn more about our ecosystems; how they operate and how we can best manage their conservation to maintain their health and the services that they provide. The alignment of my vision with the councils means I could easily broadcast the values of the ecosystem science council, and will happily give my best to fulfil the purpose of the council to help implement the six key directions outlined in the 'Foundations for the future'.

2. I am both an *ecosystem scientist* and *environmental manager*

My work spans many disciplines recognised as ecosystem science including zoology, conservation, mycology, and ecosystem dynamics. My particular area of interest is ecosystem functioning which includes studies of fungi, nutrient cycling and forest health. These areas that are often overlooked in management and underrepresented in research. As an ecologist I see that all aspects of ecosystem science contribute to the health of these systems. They are intricately linked and vastly complex and these connections are key to understanding how our ecosystems function, and therefore how we can best manage and conserve them. As an environmental manager I am aware of the different constraints end users face including competing priorities, the big picture and large scales, and managing issues that often lack clarity. End users need accessible information to underpin evidence-based decision making, but in order to achieve this clear direction on research problems is needed. Being able to see both perspectives, that of a scientist and a manager, as well as recognising the importance of ecosystem science and the challenges it faces, makes me an excellent representative of ecosystem science.

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3. I have the *skills and experience* to make a valuable contribution

My diverse background working across different sectors, disciplines and countries means I have a breadth of knowledge and skills that would help the council achieve its mission. I have a track record of delivering conservation projects and my project management skills could be put to good use sitting on the council. I would direct my experience with strategy development to outlining a way forward for ecosystem science in regards to data management and communication. Through my sustainability leadership training I have gained many tools that would enable me to contribute to working out how we can do things better and in new ways. I have strength in the areas needed for the development of standards and guidelines and would gladly put them to use to ensure that the ecosystem science information collected is of high quality and is made accessible. I also believe that clear interpretation of data will lead to better integration into policy and management guidelines so that ecosystem health is considered routinely. I am also in a good position to facilitate a change in current resourcing to support long-term research as I have been on both sides of the funding fence; as a grant applicant, and working for a grant fund assessing and managing environmental grants. I am experienced at collaborating with many different people and I have an extensive network spanning scientists, end users, and community groups. I would draw on this network, and using my communication skills, advocate the worth of ecosystem science. The search for a Brian Cox of ecosystem science is on!

For the ecosystem science council to do a fantastic job its members must be dedicated. I am ready to step up and take on an active role in the ecosystem science community.

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Signed statement

I, Bryony Horton, subscribe to the principles and ideals outlined for the Council, and that you are willing to commit the required time and energy to undertake the Council's work.

A handwritten signature in black ink, appearing to read 'B. Horton'.

Bryony Horton