

# Ecotours – towards sustainable tourism for botanic gardens

**Rusty Worsman**

Mount Tomah Botanic Garden, Botanic Gardens Trust, Australia

## Abstract

Mount Tomah Botanic Garden (MTBG) is the cool climate garden of the Botanic Gardens Trust - Sydney (BGT) and is surrounded by the Greater Blue Mountains World Heritage Area. For 10 years MTBG has been offering “ecotours” to visitors. The amazing natural diversity, coupled with the collection and sustainable management practices, creates conditions suitable for ecotourism.

The definition of ecotourism differs throughout the world. It is generally considered to be environmentally and socially responsible travel that minimises negative impacts and promotes conservation. Ecotourism is the most appropriate form of tourism in meeting the Botanic Garden Trust’s mission of inspiring the appreciation and conservation of plants.

Ecotourism within a botanic garden has to include interpretation of the practises of sustainable management through appropriate horticultural systems. As a botanic garden can not be said to have a genuine ecotour without paying attention to what goes on behind the scenes, interpretation of management of building infrastructure with waste, water and power systems must be added. The sustainable management of botanic gardens and interpretation of this allows ecotourists to take away more than simply messages on the importance of plants in natural and cultural landscapes.

## Introduction

Mount Tomah Botanic Garden is surrounded by the Greater Blue Mountains World Heritage Area. This area covers approximately one million hectares. MTBG is fortunate in having a conservation area of 187 hectares that adjoins the GBMWhA. The amazing natural diversity coupled with both the garden’s collection and its sustainable management practices creates conditions suitable for ecotourism. This paper will be a reflection of a botanic garden that has attempted to incorporate the philosophy of ecotourism.

## Discussion

The Blue Mountains region supports an extensive tourist industry and is famous for its adventure and nature-based activities such as canyoning, climbing, bush walking and mountain biking. Nature based tourism as opposed to ecotourism often relies more on the "wow" factor of nature without any interpretation. Some gardens can also be said to use the wow factor of horticulture without interpreting the stories of the plants within a display.

Ecotourism is distinct from other forms of nature based tourism in that it involves interpretation of natural and cultural environments along with ecologically sustainable management of the natural area being visited. It supports conservation and brings benefits to the local community (Beeton 1998). The definition of ecotourism differs throughout the world. It is generally considered to be environmentally and socially responsible travel that minimises negative impacts and promotes conservation. This fits closely with the 2010 targets for botanic gardens

### **d) Promoting education and awareness about plant diversity:**

**17) Every botanic garden to have a communication, education and public awareness programme that**  
**1) communicates the importance of plant diversity and ecosystem services in sustainable livelihoods**  
**and 2) promotes the need for action.**

Ecotourism is an appropriate form of tourism which endeavours to meet the Botanic Garden Trust's mission of inspiring the appreciation and conservation of plants.

The Mount Tomah Botanic Garden ecotour is accessed by a bridge donated by the Friends of the Garden. The conservation area has a range of ecosystems including temperate rainforest, woodland, hanging swamp and heath. There are more than 700 plant species surrounding Mount Tomah (The Mount Tomah book 1987),

There were a number of challenges in designing and implementing the tour. MTBG is isolated from public transport infrastructure and building a package was reliant on free independent travellers using their own vehicles to reach the tour site. Attempting to keep costs down precluded utilising another company to provide transport from Sydney. The debate on environmental footprints of travellers getting to tour destinations is beyond the scope of this paper.

The upper segment of the tourism market can afford to pay the higher costs of independent travel to tour sites. The upper segment includes the very competitive conference and incentive groups. In an attempt to break into this market a group was formed called the Community Alliance for Sustainable Tourism. This included ecotour operators and ecologically accredited accommodation providers. CAST attempted to set standards in the local tourism industry. Unfortunately there are many Sydney based companies, with catchy names that espouse to be ecotour operators yet they have high volumes of people through tours with limited interpretation. The competitive nature has forced many genuine ecotourism operators from the industry.

Today 80% of people undertaking the tour are education groups including schools, colleges and universities. These groups are taken through at a lower fee compared to other ecotourists. The tour fee means that the tour is cost neutral to BGT. Having large education groups utilising the tour can create impact issues. This has been addressed by keeping student to guide ratios at 13 to 1, with an additional teacher. Industry guidelines accept 12 to one however younger students take up less space with "smaller footprints". There could still be debate on the impact children can have on any space as most teachers or parents can attest.

One issue that needed robust discussion was the carrying capacity of the area. How many people can visit an area without destroying it? This is a common theme with gardens with high visitation and show lawns. These gardens may have management styles of "don't walk on the grass". The MTBG Conservation Area shows few signs of human impact apart from the margins that follow the main public road where weeds and rubbish have to be managed.

The conservation area carrying capacity was originally determined with regard to the type of soils the trail passed over. Trails are of natural surface of either, basalt, shale or sandstone derived soils with no stabilisation or surfaces added. Trails were designed to use natural contours and virtually no erosion has taken place. Following the construction of the bridge, a further donation from the Friends of the Garden has allowed us to develop a link track with sandstone steps

Comprehensive measurements, other than visual assessment by staff of MTBG on the effects of the visitors on vegetation, have not been undertaken. Vegetation growth tends to out compete the impact of visitors with regular pruning required. Australia's often prickly vegetation can be used as a deterrent to keep groups on the trail. Different ecosystems at MTBG appear to have differing capacities for the number of people that can visit before impact becomes apparent. The temperate rainforest with basalt derived soils has a higher capacity for visitation without showing signs of human impact. The higher clay content and leaf litter offers more protection from scouring of water along tracks and minimises impact of foot traffic. The Superb Lyre Bird which is about the size of a chicken also contributes to the masking of human traffic impact. It does this by moving approximately 63 tonnes of leaf litter per bird per hectare per annum (Adamson D Selkirk P.M & Mitchell P. 1983).

The shale derived soil with relatively high clay content in the wood land areas is more robust as a trail surface than the sandstone derived soils. A small catchment and managed runoff means the area can cope with a reasonable amount of foot traffic. The heath ecosystem appears much more vulnerable to human impact with its underlying sandstone with bands of ironstone. As ecotourists are guided through the area they are shown how to walk softly and where to tread without damage to this sensitive area.

Interpretation is one area where ecotourism differs from standard tourism or nature based tourism. Botanic gardens have an edge on the rest of the tourism industry in that if they don't have satisfactory interpretation

via signage or other methods they endeavour to achieve it. Few major botanic gardens offer simply the stamp collections of the past. However some gardens still struggle with the difference between information and interpretation. For example:

***Wollemia nobilis***

**Wollemi Pine**

**South-eastern Australia, Wollemi National Park. A monotypic genus of the southern hemisphere, conifer family which includes the genera Araucaria and Agathis – family ARAUCARIACEAE**

Information like this may be of interest to botanists or enthusiasts however it would never help to raise an awareness of a threatened species. Interpretive tours such as ecotours offer a way around signs of the past. A useful definition is that interpretation is - an explanation of the natural cultural or historic values attached to places. It enables visitors to gain insight and understanding of the reasons for conservation and ongoing protection of our heritage.

***“Examining ecotourism accreditation values would be a useful guide to those conducting tours in botanic gardens. An example is Ecotourism Australia, which is a non-profit organisation which operates an eco-certification program with guidelines of how to look at sustainability issues. A botanic garden can not be said to have a genuine ecotour or offer sustainable tours without paying attention to what goes on behind the scenes. The sustainable management of botanic gardens and subsequent interpretation of this allows ecotourists to take away more than isolated messages on the importance of plants in natural and cultural landscapes. This can be applied to botanic gardens, even those without natural areas. By looking at the values inherent in ecotourism one can see it as more than a tourist simply viewing aesthetic features”***

(Department of Conservation, Wellington June 2005)

Some botanic gardens have beautiful displays of endangered plants without any reference to how those plants may be ultimately conserved. A sign that simply says this daisy is threatened by land clearing in its natural habitat is not going to make any impact in protecting the native habitat. Eco style tours may be used as a vehicle to translate the “Wow“ of horticultural displays for a better community understanding of sustainability and environmental issues. This could even be used in city gardens without a natural landscape around.

Meeting different 2010 Targets can be assisted by Botanic Gardens demonstrating that their own “house is tidy”. It is difficult to convince communities around the world that the conservation and management of threatened species is necessary without first showing sustainable practices that can be achieved. Ecotourism is a vehicle that would go a long way to help negate public views that are held of many government organisations of a: “do what I say not what I do” mentality. At the BGT the aim of the environmental plan is:

***Everything we do at the Botanic Gardens Trust has an impact on the environment.***

We want to leave as small an environmental footprint as we can, and to influence others to do the same.

Mount Tomah Botanic Garden has in place different initiatives that are interpreted in our tours - both garden and ecotours. There is a significant emphasis on how the garden is striving for horticultural sustainability. This includes water management, waste management, power management, sewage treatment, chemical use and consumables.

- All green waste is composted and reused.
- Food scraps from the restaurant and staff lunchroom are broken down with a worm farm and reused.
- All sewage is treated on site.
- Chemicals sprays have been reduced or eliminated and integrated pest management techniques are used.
- Water is collected from site as there is no town water supply. This has been an issue with a drought for the past 4 years. Extensive use of different mulches has limited water usage in the garden.

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- Native grasses are being trialled which require less water when established and less mowing.
  - “Green” Consumables such as recycled paper and products are used where ever possible.
  - Old energy inefficient heaters have been replaced with more efficient heaters that cost much less to run.
  - Display lighting has been changed to use less power.
  - The new class room that is being constructed will have a geothermal power system which will be situated under a garden lawn.

## Conclusion

Mount Tomah Botanic Garden is fortunate in having a large conservation area adjoining the garden to run tours to inspire the appreciation and conservation of plants. By demonstrating positives in “eco” tours it is easier to sell the messages and enthuse people about the environment and what they can do in their own residential gardens. Demonstrating quality environmental initiatives even on a small scale can help empower people and ultimately inspire the appreciation and conservation of plants and the environment. However if Mount Tomah was a city garden like the Royal Botanic Gardens Sydney, the sustainable horticultural and infrastructure initiatives would still be interpreted in ecotour style by both education officers and volunteer guides, demonstrating what botanic gardens can do to promote environmental initiatives.

## Bibliography

- Adamson D Selkirk P.M and Mitchell P., 1983, *The role of fires and lyrebirds in the sandstone landscapes of the Sydney Basin*, In R.W Young and G.C Nanson (eds), *Aspects of Australian Sandstone Landscapes*, Australian Geomorphology Group, Wollongong, 81-93, (1983))
- Ingram C.K ., 1987, *Vascular Flora of Mount Tomah*, in *The Mount Tomah Book*, The Mount Tomah Society & The Royal Botanic Gardens Sydney.
- Colquhoun, F., 2005, *Interpretation handbook and standard –distilling the essence*, Department of Conservation , Wellington, New Zealand Ed.