

Geotourism, Geodiversity and Geoheritage in Australia – Current Challenges and Future Opportunities

Angus M. Robinson¹ and Ian G. Percival²

¹ Managing Partner, Leisure Solutions® P O Box 638, Strawberry Hills, NSW 2012, Australia (angus@leisuresolutions.com.au)

² Geological Survey of New South Wales, WB Clarke Geoscience Centre, 947-953 Londonderry Road, Londonderry, NSW 2753, Australia. (ian.percival@industry.nsw.gov.au).

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Geotourism, in addition to its primary role in promoting tourism to geosites, raises public awareness and appreciation of geodiversity. It fosters geoheritage conservation through appropriate sustainability measures and advances sound geological understanding through interpretation. Currently in Australia, geotourism is in its infancy and faces a range of challenges, including lack of awareness and support within the geological professions and varying degrees of acceptance by natural resource managers. Geodiversity on the other hand is now widely appreciated as part of the natural heritage, and is being integrated into government policy concerning the management of national parks and public lands to a degree approaching the stewardship of the native flora and fauna, as greater emphasis is placed on the underlying control of distribution of the living environment by geology and landscape. Conservation of geodiversity and geoheritage is thereby progressing rapidly in some areas, though in others such as the development of geoparks in the

Australian context, significant barriers have yet to be surmounted. The recent Symposium on Geodiversity, Geological Heritage and Geotourism, organised by the Linnean Society of New South Wales at Port Macquarie in September 2010, provided an opportunity to discuss these matters from a number of viewpoints, including government, academic and the private sector.

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Given Australia's heavy reliance on the expertise of geologists and the exploitation of natural resources for wealth creation, it would be logical to assume that the interpretation of geology and landscape feature extensively in the character of Australia's 'nature-based' tourism industry. However, geotourism is at a very early stage of development in Australia, and faces many challenges, ranging from achieving agreement on what the term actually means, to building a support and advocacy base and further to raising awareness amongst Australian domestic travellers. In comparison, appreciation for geodiversity as an essential part of the natural environment is well advanced, and – thanks to Australia's diverse underlying geology and associated scenic landscapes – many national parks and other public lands protect a broad spectrum of geological heritage sites that are either current or potential foci of geotourism.

Natural Heritage, Geoheritage, Ecotourism, and Geotourism

Natural heritage is the legacy of natural objects and intangible attributes encompassing the countryside and natural environment, including biodiversity (the variety and distribution of flora and fauna), as well as geodiversity (involving landforms and geology). Geoheritage is exemplified by geological sites of outstanding and sometimes unique scientific and scenic

value which enable us to understand the composition of the earth, the internal and external processes that have shaped it, and the evolving flora and fauna that occupied it.

Geodiversity and geological heritage are best experienced by visiting natural places, thereby providing the rationale for geotourism, now increasingly considered a key driver of 'experiential' tourism. Like ecotourism, geotourism is ecologically sustainable tourism with a primary focus on experiencing natural areas that fosters environmental and cultural understanding, appreciation and conservation. Geotourism enables the public to explore the full range of geodiversity, and can be undertaken in a range of places that include geosites, geo-trails, landforms, karst areas and caves, and mine sites. In addition, geotourism can embrace a range of designated areas which include national parks/reserves/urban parks, world heritage areas, 'national landscape' areas, and geoparks and paleoparks.

The downside of the popularisation of ecotourism in recent years is that the activity itself may progressively destroy the very values that appeal to the ecotourist. This is a continuing problem, particularly now as the greatest impact of mass ecotourism is falling on the most fragile of environments. Thus geotourism must seek to understand its impact on geodiversity and strive to protect and expand geological heritage sites that form in many instances the basis for its existence.

Geoparks – the Australian experience

A geopark is defined by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as a territory encompassing one or more sites of scientific importance, not only for geological reasons but also by virtue of its archaeological, ecological or cultural value. There are currently 77 global geoparks operating in 24 countries around the world as part of the UNESCO Geoparks International Network.

One of the most important aspects of a geopark is the link between the geology and the people, their stories, culture and history that builds a sustainable source of geotourism, brings jobs to rural and indigenous people and in turn, helps protect sites of importance, and promotes geoheritage. Although a geopark has no formal protected lands status (unlike a nature park managed by a government agency), an existing national park or any other designated area may qualify as a geopark, if it has a management plan designed to foster socio-economic development that is sustainable (most likely to be based on geotourism). In addition, the proponents of the geopark must (1) demonstrate methods for conserving and enhancing geological heritage and provide means for teaching geoscientific disciplines and broader environmental issues, and (2) have prepared joint proposals submitted by public authorities, local communities and private interests acting together, which demonstrate the best practices with respect to geoheritage conservation and its integration into sustainable development strategies.

Kanawinka Geopark, the first (and currently, only) one in Australia, was declared in 2008. It occupies an area of 26,910 square kilometres spanning nine Shire Council areas in southwestern Victoria and eastern South Australia. The geopark represents the sixth largest volcanic plain in the world with 374 eruption points, with Recent volcanism extending from the Mount Gambier area in South Australia into the Portland (Victoria) shoreline and north as far as Penola and Mount Hamilton.

However, Kanawinka Geopark has so far been unable to gain Australian Government approval which would enable UNESCO to assign 'global geopark' status. Australian Government Ministers for the Environment and Heritage (EPHC) met in November 2009 and decided that whilst Australian governments support geological heritage, they have significant concerns with the application of the UNESCO Geoparks concept in Australia, especially without government endorsement. Furthermore they

determined that existing mechanisms are considered sufficient to protect geoheritage in Australia. In its formal communiqué, the Ministerial Council also requested the Australian Government ask UNESCO to take no further action to recognise any future proposals for Australian members of the Global Geoparks Network, or to further progress Geoparks initiatives within Australia, including that for the Kanawinka Geopark, unless the formal agreement of the Australian Government has first been provided.

As a response to the EPHC decision, the author of one of the presentations at a subsequent Linnean Society of NSW Symposium suggested that several other issues need to be addressed before geopark development can proceed any further in Australia. These issues include the following.

1. There are other competing 'land designation' systems underpinned by environmental, heritage and tourism values e.g. national parks, world heritage areas, including 'national landscapes'.
2. The nature of Australia's political system means that any geopark proposal needs to be accommodated and supported by three levels of government.
3. There is a relatively low profile of geoscience in the Australian community – overshadowed by the strong influence of the Australian mining industry lobby.
4. Apathy amongst the Australian geological community is not helped by the decline in geoscience education and university geology schools in recent years.
5. The geopark concept is not yet embraced or understood by the geological profession.
6. The agricultural/mining industries (which have competing land requirements) are yet to be engaged.

7. The state/territory Geological Surveys and Geoscience Australia are not yet engaging to any significant extent in geopark development and geotourism generally.
8. No government funding programs are available for geopark development.

AUSTRALIAN GEOTOURISM – FUTURE OPPORTUNITIES

Australia's National Landscape Program

'Experiential tourism' has been captured in the Australia's National Landscapes program (a partnership of Tourism Australia and Parks Australia), where visitors can experience the best of Australia's natural, cultural and spiritual wonders – to be known as 'Experiencescapes.' These are world-class landscapes distinctive to Australia, and include many geoheritage sites. The National Landscapes program currently includes the following 10 regions: Australian Alps (New South Wales/Victoria), Australia's Green Cauldron (New South Wales/SE Queensland border region), Australia's Red Centre (Northern Territory), Australia's Coastal Wilderness (New South Wales/Victoria), the Flinders Ranges (South Australia), Kangaroo Island (South Australia), the Great Ocean Road (Victoria), the Greater Blue Mountains (New South Wales), the Kimberley (Western Australia), and West Arnhem/Kakadu/Nitmiluk (Northern Territory).

Four other regions are also under active consideration viz. Ningaloo-Shark Bay (Western Australia), South Coast (Western Australia), the island of Tasmania, and the Great Barrier Reef (Queensland). Two other areas (i.e. Sydney Harbour and the Wet Tropics area of North Queensland) have been nominated for discussion.

Geotourism and Mining Sites Geoheritage

A significant feature of geotourism is that it does not require untouched landscapes as its playground. A great tour can equally be delivered overlooking a man-made excavation, or in a historic mining area e.g. Broken Hill in New South Wales, Chillagoe in North Queensland and the West Coast of Tasmania. Nor does geoheritage potential need to be restricted just to geological features. For example, the Australian Government Department of Environment, Water, Heritage and the Arts has been assessing both the mining and minerals (i.e. economic geology) heritage of Broken Hill from the perspective of the following attributes: (1) Broken Hill's prominent role in Australia's mining history; (2) its role in the development of innovative mining and metallurgical practices; (3) as the place where safe working practices and workers' legislation was first developed for miners; (4) for its well-known mineralogical diversity; and (5) for its importance for the associations with many individuals who have played a prominent role in the Australian mining industry.

Geoheritage, Geotourism and the Geological Profession

In July 2010, at the Australian Earth Sciences Convention (AESC 2010), a workshop was organised in collaboration with the Geological Heritage Standing Committee of the Geological Society of Australia, The AusIMM, and the Australian Department of the Environment, Water, Heritage and the Arts, to explore the interface between the issues relating to geoheritage and the emerging area of geotourism. Of nine formulated workshop conclusions, the following points are considered particularly relevant in the context of understanding opportunities for geotourism development in Australia.

1. Given the broad range of concepts encompassed by and related to geoheritage, there is a need for the geological profession (or more generally the geoscience professions) to engage further with relevant government agencies to improve

mutual awareness and understanding, as well as to better coordinate interaction with relevant government agencies.

2. There is a need to make better known to established and prospective geotourism operators and others the availability of various state/territory resources which identify and promote geoheritage sites. This should include information on site suitability for geotourism.
3. There is continuing concern about the lack of understanding both within the geoscience professions and the general community of the differences between the concepts of geoheritage and geotourism.
4. Interest in mining heritage can be expanded to embrace areas of geoheritage pertaining to economic geology (i.e. relating to the minerals industry). Moreover, there is an opportunity to encourage individual mining companies and industry associations to assist with funding aimed at helping in the conservation of geoheritage and to foster higher levels of community awareness through the support of geotourism activities, where practicable.
5. There is an opportunity to foster and promote geotourism initiatives within Australia's National Landscapes with geological and geomorphological significance, as a model to advancing geotourism and geoheritage considerations in other regions, having particular regard to the recently stated views of the EPHC relating to the advancement of geopark proposals in Australia.

Linnean Society of NSW Symposium on Geodiversity, Geological Heritage and Geotourism – an overview

The recent Linnean Society Symposium, held at Sea Acres National Park in Port Macquarie, NSW from 6-10th September, 2010, addressed many of the issues, challenges

and opportunities discussed above. The Symposium was co-sponsored by the Geological Survey of NSW (GSNSW), part of I&I NSW, and the Department of Environment, Climate Change and Water NSW (DECCW) through its Karst and Geodiversity Unit. Both organizations provided a number of speakers. Others amongst the 55 registrants came from the Commonwealth Department of Environment, Heritage and the Arts, and from the Tasmanian Department of Primary Industries, as well as researchers from several universities and museums, teachers, private sector tourism operators and ecological consultants, and retired persons active in local geotourism ventures. Several days of talks were interspersed with two day-long field trips to investigate various aspects of the regional geodiversity of the mid North Coast.

Abstracts from the papers presented at the Symposium, together with the guide to the field trip localities, were compiled into a book produced for attendees. All abstracts and most presentations given at the Symposium are available for download at <http://www.dpi.nsw.gov.au/minerals/geological/info/geodiversity-symposium>. A link to this site is available on the Linnean Society's website www.linneansocietynsw.org.au. Nine of the papers from the Symposium have been submitted for publication in this volume of the *Proceedings of the Linnean Society of NSW*. Others, which were more concerned with government policy issues, legislation pertaining to geodiversity and geoheritage conservation, or geotourism, are being prepared for publication elsewhere.

[Ian Percival publishes with permission of the Director, Geological Survey of New South Wales].