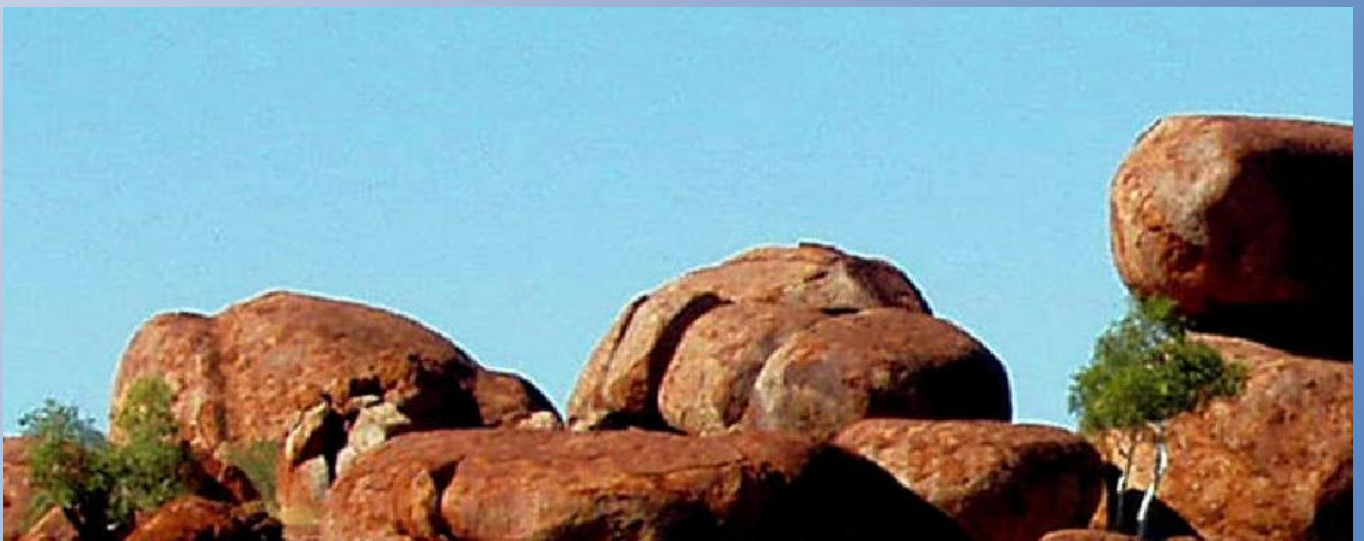


National Rock Garden

Celebrating the Geological Heritage of Australia

Newsletter No. 5

January 2013



www.nationalrockgarden.org.au

Recent developments

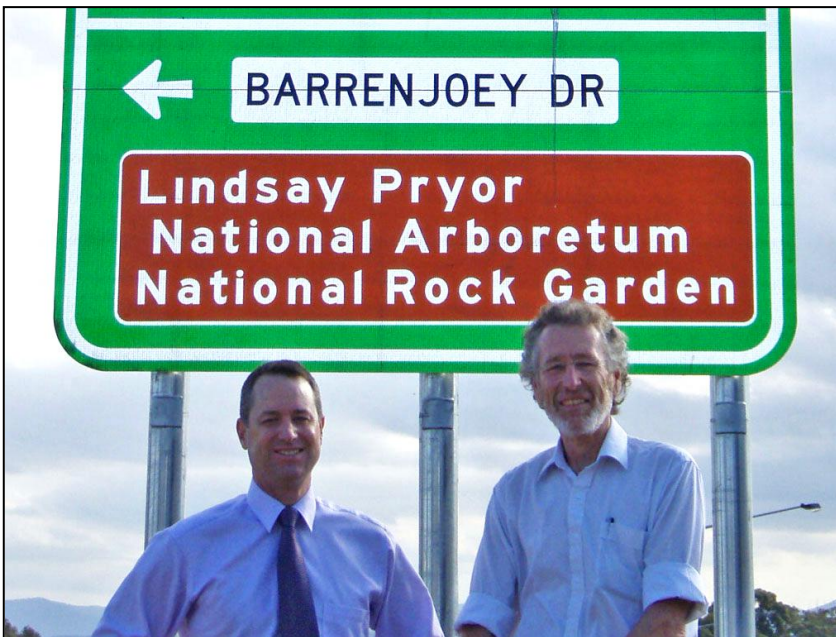
Brad Pillans, Chair of the NRG Steering Committee

Two recent developments have given the National Rock Garden (NRG) a major boost. Firstly, the Australian National University (ANU) has agreed to become an Education Partner of the NRG and, secondly, the NRG has been made part of the Centenary of Canberra celebrations.

At a time when university budgets are stretched to the limit, the ANU has generously agreed to provide \$100,000 in funding for the NRG. A draft Memorandum of Understanding has been drawn up and, once it is approved and signed, ANU will become an Education Partner with the NRG.

Dean of the ANU College of Physical and Mathematical Sciences (and GSA member), Professor Andrew Roberts, summed it up pretty well: “In Australia, we owe much of our national prosperity to our geological resources. The NRG is a great way to communicate to the general public about Australia’s geological heritage. As one of the world’s great Earth Science research establishments, it makes sense for ANU to partner with the Geological Society of Australia in the NRG”.

On the 13th of October 2013, in Earth Science Week and during Centenary of Canberra celebrations, an inauguration ceremony will be held at the site of the NRG on the western side of Lake Burley Griffin. Not to be confused with an opening ceremony, which is still some years away, the NRG inauguration ceremony will mark the arrival of the first big rocks on site – eight to be exact, if things go according to plan.



Andrew Roberts and Brad Pillans at the NRG tourist sign – a sign of things to come!

It is proposed that an important element of the NRG will be 8 large rocks representing each of the States & Territories of Australia and commemorating Federation - the ‘raison d’etre’ for Canberra. They will be displayed permanently and prominently near the NRG entrance and will form a centenary link to the six-sided Canberra Foundation Stone, laid in March 1913, in front of Parliament House.

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The Foundation Stone was intended to be the base for an obelisk, made of rock from around the British Empire, but it was never completed. The base is made of ‘Bowral trachyte’, also known as Mt Gibraltar microsyenite, once a popular building stone that we may also choose to display in the NRG.



Canberra Foundation Stone, laid in 1913, and relocated to the lawns in front of New Parliament House in 1988. (Photos – Brad Pillans)



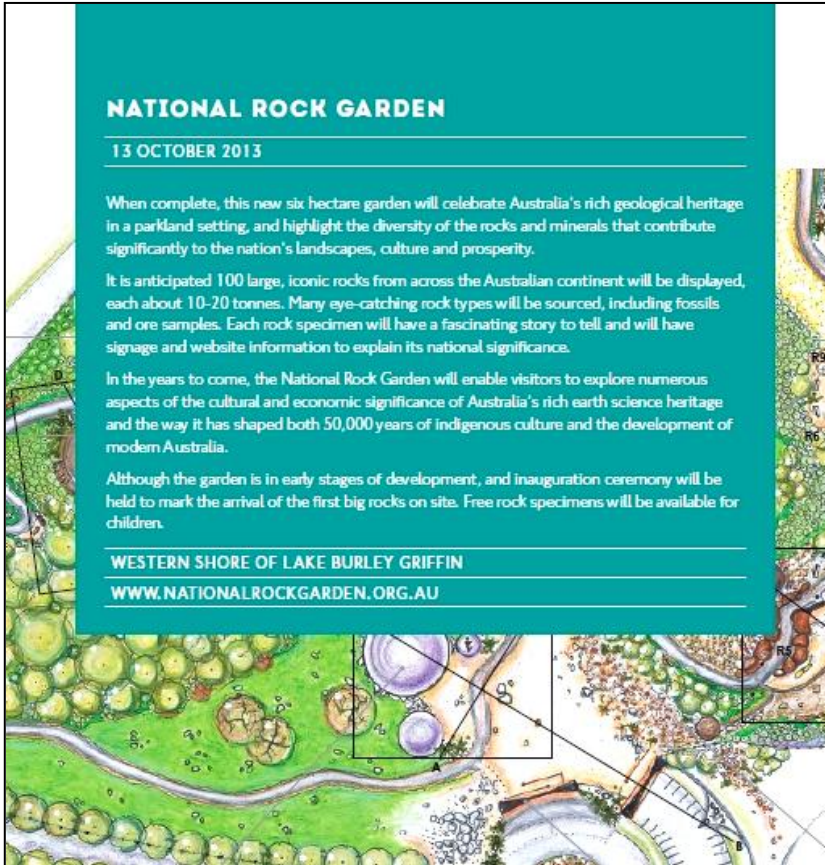
Each of the 8 rocks, to be known as the “Federation Rocks”, will be selected for its special significance to the State or Territory from which it comes. The NRG is liaising with the ACT Government to encourage all states and territories to fund the Federation Rocks.



Vehicle turning circle and car park – site for the “Federation Rocks” ?

On-site – Centenary of Canberra

This year Canberra celebrates the naming of the capital city of Australia by Lady Denman on 12 March 1913. As part of the centenary celebrations there will be an inauguration ceremony at the National Rock Garden site on Sunday 13 October 2013 at which some of the first rocks will be displayed.



Put the date in your diary.

Extract from the Centenary of Canberra official program.

Genesis – in the beginning....

Some readers of this newsletter may be unfamiliar with the genesis of the National Rock Garden project and the development of the concept. Read on.....

It all started in June 2008 when Doug Finlayson, accompanied by wife Caryl, attended the **13th International Symposium on Deep Seismic Profiling of the Continents and their Margins** in a small skiing centre/village called Saariselkä deep within the Arctic Circle of northern Finland.

National Science Centre, Helsinki



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There, serendipity (a happy accident) played its part, Serendip being the old name for Sri Lanka where Caryl was born. En route by train back to Finland's capital city Helsinki, Doug and Caryl passed within sight of the Helsinki Science Centre at Vantaa and spotted the impressive display of rocks from across Finland in the forecourt to the building.

In the same year the "***Geological Guide to the Canberra Region and Namadgi National Park***" had been published by the ACT Division of the Geological Society of Australia and the idea of putting together a public display of Canberra region rocks was proposed. However, quick as a flash, Caryl countered with the idea of "thinking big". Why not a celebration of the rich geological heritage of the whole of Australia with massive rocks from across the continent? Bearing in mind that Australia's prosperity had been built on its geological heritage from the gold rushes onwards, surely this was a worthy theme for the nation's capital city alongside other national monuments and institutions.



A discussion paper on the concept was circulated among GSA (ACT Division) members in August 2008 and things "snowballed" from there. After lengthy negotiations within the Geological Society and with the National Capital Authority (NCA), the project was "launched" by the NCA CEO, Gary Rake, at the Australian Earth Science Convention in Canberra during July 2010.



Australian landscapes

Bungle Bungle Mountains, Purnululu National Park, WA

Description from - UNESCO, World Heritage List (<http://whc.unesco.org/en/list/1094>)

The Bungle Bungle Mountain Range is one of the landscapes within the Purnululu National Park located in the East Kimberley Region of Western Australia 300 km by road south of Kununurra in Western Australia's Ord Region. The listed area of the national park is almost 240,000 ha. The Bungle Bungle Range is one of the most extensive and impressive occurrences of sandstone tower karst in the world.

The Bungle Bungle Mountains are an unusual and very dramatic plateau of Devonian quartz sandstone, created through a complex process of sedimentation, compaction, uplift (caused by the collision of Gondwanaland and Laurasia approximately 300 million years ago and the convergence of the Indo-Australian Plate and the Pacific Plate 20 million years ago), as well as long periods of erosion. The Bungle Bungle landscape comprises a mass of beehive-shaped towers with regularly alternating, dark grey bands of cyanobacterial crust (single-cell photosynthetic organisms).



Bungle Bungles, W.A.

The plateau is dissected by 100-200 m deep, sheer-sided gorges. The cone-towers are steep-sided, with an abrupt break of slope at the base and have domed summits. Their surface is fragile but stabilized by crusts

Photo – Michael Finlayson

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of iron oxide and bacteria. They provide an outstanding example of land formation by dissolution weathering of sandstone, with removal of sand grains by wind, rain and sheet wash on slopes.

The prime scenic attraction within the national park is the extraordinary array of banded, beehive-shaped cone towers comprising the Bungle Bungle Range. These have become emblematic of the park and are internationally renowned among Australia's natural attractions. The dramatically sculptured structures, unrivalled in their scale, extent, grandeur and diversity of form anywhere in the world, undergo remarkable daily and seasonal variation in appearance, including striking colour transition following rain and with the positioning of the sun. The intricate maze of towers is accentuated by sinuous, narrow, sheer-sided gorges lined with majestic *Livistona* fan palms. These and the soaring cliffs up to 250 metres high are cut by seasonal waterfalls and pools, creating the major tourist attractions in the park.

Purnululu National Park is currently one of the 12 Australian natural heritage sites listed on the UNESCO World Heritage Register. To date there are 188 UNESCO natural heritage sites listed world-wide.

Friends of the National Rock Garden

Anyone is welcome to join the “Friends” support group, whether or not they are an earth scientist. Clubs and institutions may also wish to join us. GSA encourages input and support from the public at large, academia, commerce, and the education, tourism and resource industries. See the news and information boxes on the National Rock Garden web site – www.nationalrockgarden.org.au

Feedback and further information

The Geological Society welcomes feedback and suggestions on the development of the National Rock Garden. See the feedback boxes on the National Rock Garden web site – www.nationalrockgarden.org.au

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The newsletter is circulated twice a year, Dec/Jan and June/Jul. New “friends” are welcome and can be added to the email circulation list by contacting the editor. You don’t have to be an earth scientist. Members of the public, students and educators with an interest in the evolution of the Australian continent are all welcome. Newsletters are also posted on the National Rock Garden web site –

www.nationalrockgarden.org.au



National Rock Garden
Celebrating the Geological Heritage of Australia

To recognise, acknowledge and celebrate Australia’s rich geological heritage in a parkland setting within the nation’s capital, and demonstrate to present and future generations of Australians the diversity of the rocks and minerals that contribute so significantly to the nation’s landscapes, heritage and prosperity.

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