Welcome to another edition of World Heritage Connect Newsletter. The idea for this newsletter was conceived a few years ago to help build a stronger network and to share stories across the nation’s World Heritage executive officers, rangers, policy makers and everyone in between who are involved in managing Australia’s amazing World Heritage places. Five issues later I am delighted to see our distribution list growing, a keenness to submit articles and some really positive feedback.

Hope you all have a fantastic holiday season full of good times and some relaxation amongst the natural beauty we are so lucky to enjoy in Australia.

Until next issue

Angie Stringer
World Heritage Management Unit
Department of Environment and Heritage Protection, Queensland
Wet Tropics World Heritage Family

Queensland’s World Heritage properties are like a family. Despite their many differences, they share a common heritage and more similarities than we may be aware of. These ancestral connections can be subtle, but Queensland’s World Heritage properties share an ancient geological and evolutionary history that underlies their Outstanding Universal Value.

Floral and faunal links

Some of the ancient plants and animals of Gondwana, and their descendants, can still be found today in forests ranging from Lorentz World Heritage property in Papua (Indonesia) to the Wet Tropics of Queensland, the Gondwana Rainforests of Australia, the Greater Blue Mountains World Heritage area and down to the Tasmanian Wilderness World Heritage area. A large percentage of the fossils at Riversleigh (part of the Australian Fossil Mammal Sites World Heritage area) have furred and feathered descendants still scurrying around the ancient and relict rainforests of the Wet Tropics World Heritage area. Distant Gondwanan relatives can also be found in World Heritage properties in South America, South Africa and India.

Geological links

The Great Escarpment of Eastern Australia was formed in even more ancient times when Gondwana was part of the supercontinent Pangaea. This defining feature can still be seen in the escarpments of the Blue Mountains and the mountain ranges of the Gondwana and Wet Tropics World Heritage areas. The Great Escarpment provided a range of topography, consistent rainfall and evolutionary refugia which enabled many of the relict Gondwanan plants and animals to survive changes in climate through to the present.

The erosion of the Great Escarpment and the build-up of natural sediments over millennia have produced large shallow-water plateaus. These plateaus provided an ideal platform for the coral reefs and the marine environments of the Great Barrier Reef World Heritage area to flourish. Erosion of the Great Escarpment has also provided the sands which helped to form Fraser Island. The sand-capture features of the rocky headlands of Fraser Island World Heritage area trap sand flows from the south which in turn support the establishment of the Great Barrier Reef.

Creating new relationships from ancient links

The Wet Tropics Management Authority is developing a collection of stories detailing the common evolutionary lineages across Queensland’s World Heritage properties as well as some of Australia’s other World Heritage properties. The stories will highlight the Outstanding Universal Value of the Wet Tropics World Heritage area and how this relates to a wider World Heritage family.

Working together with the nature-based tourism industry, the Authority hopes to inspire, motivate and educate tour operators, locals and visitors to gain a deeper understanding and greater appreciation of what it means to be a World Heritage area and how these areas of Outstanding Universal Value have family connections.

Demonstrating a shared evolutionary heritage between World Heritage properties will also help to promote a closer collaboration and relationship with other Australian and international World Heritage properties. This could also provide a strong, scientific rationale and opportunities for ‘twinning’ arrangements between respective management agencies. For more information on this project please contact Terry.Carmichael@wtma.qld.gov.au

Terry Carmichael
Principal Project Officer,
Learning Landscapes
Wet Tropics Management Authority
Willandra Wisdom Walk

Over four days in April 2015, significant sections of the Willandra Lakes Region World Heritage area were walked together by; Traditional Owners, scientists, Australian and international artists, key tourism representatives and the broader public.

The journey was the inaugural Willandra Wisdom Walk—an initiative of the Curator of Mildura Palimpsest Biennale No. 10 (one of Australia’s premier contemporary art events), the Barkandji/Paakantyi, Mutthi Mutthi and Ngiyampaa Traditional Owners and the NSW National Parks and Wildlife Service Willandra Lakes Region World Heritage Area. The result was a meaningful demonstration of the power of sharing knowledge on how to care for country.

The Willandra Wisdom Walk was the result of conversations with the Barkandji/Paakantyi, Mutthi Mutthi and Ngiyampaa Traditional Owners on how to look after Country—and what better way to do that than to walk and talk? The outcome was to share the experience of walking Country together and to listen to an incredible international diversity of knowledge.

This resulted in the creation of a major contemporary art exhibition Unmapping the End of the World as part of Mildura Palimpsest Biennale No. 10, bringing that conversation to a wider audience. Participating artists were welcomed back for the launch of the project on one of the private landholdings within the Willandra Lakes Region World Heritage Area on 2 October 2015, followed later that evening by the Opening Event of the Biennale’s Unmapping the End of the World at Mildura Arts Centre.

The inaugural walk was designed by Aboriginal Elders. The Elders invited World Heritage stakeholders to walk with the 14 national and international artists, including two local Paakantji and Mutthi Mutthi emerging artists Ricky Mitchell and Daryl Pappin. The walk commenced at the highly significant ancestral trackway on Mungo National Park, then journeyed to other significant sites within the World Heritage Area, on park and private properties.

The inaugural Willandra Wisdom Walk saw stakeholders and Traditional Owners of the World Heritage Area sharing their knowledge, ideas and experiences of what is significant about the property and what needs to be managed and protected into the future. The walk inspired a diverse group of Australian and international artists, as well as the general public, and greatly enhanced their understanding of the intercultural significance of Willandra Lakes Region World Heritage Area.

There is significant potential in the possible expansion of the Willandra Wisdom Walk. This could be both a catalyst for positive engagement between all the Traditional Owners and also a powerful intercultural mode of engagement. Recognising the uniquely Australian Indigenous expressions of connection to Country, the Wisdom Walk is capable of bridging knowledge gaps between cultures and of fostering national and international understanding.

Dan Rosendahl
Executive Officer, Willandra Lakes Region World Heritage Area
NSW Office of Environment and Heritage

Jonathan Kimberley
Curator, Mildura Palimpsest Biennale No. 10 2015
The Getty Foundation supports concrete conservation research at Sydney Opera House

Sydney Opera House is famous for its innovative use of structural concrete as an architectural feature. It is one of the world’s busiest performing arts centres, staging around 1900 performances each year. The Opera House is also among Australia’s most visited tourist destinations with annual site visitation around 8.2 million.

The World Heritage listed Opera House is a structure primarily built of reinforced and post-tensioned concrete, and has been subjected to environmental elements for more than 50 years. With few precedents for conserving its modern building materials, the challenge is to find the most effective methods to monitor the condition of the structure and develop best practice strategies for long-term conservation.

The Getty Foundation in Los Angeles, USA recognised the global challenge for understanding the lifecycle of newer materials used in many modern heritage sites and established the Keeping It Modern program to fund international research on the subject. Sydney Opera House was selected as one of ten international heritage-listed sites, and received a grant from the Getty Foundation to co-fund research into the condition of the concrete in the Opera House structure and development of a long-term Concrete Conservation Strategy.

The project commenced in July 2014 and is being completed over two years, in partnership with the University of Sydney and Arup. As well as considering a concrete conservation strategy, three key areas of the Sydney Opera House concrete structure are being considered in detail: sail structure and tile lid attachments; exposed concrete roof pedestals at the base of the sails; and the structure under the Northern Boardwalk.

Academics and students from the disciplines of civil engineering, chemical engineering, architecture and heritage conservation have been involved in this project by undertaking specialised students’ thesis projects. They have been contributing to various aspects ranging from the analysis of past and current concrete condition assessment reports to the development of the structural assessment framework for the Sydney Opera House within the context of concrete conservation principles, addressing the needs of historic twentieth century concrete buildings.

The Concrete Conservation Strategy will be digitally integrated with the Opera House’s cutting edge 3D Building Information Management (BIM) Model, which is being developed in partnership with an international consortium consisting of AECOM (Australia), BIM Academy (UK) and EcoDomus (USA).

When complete, the BIM will be populated with data related to previous work carried out at the Sydney Opera House to establish a repository of knowledge of the constructed structure and of modifications and repairs taken place overt time. Tools linked to the BIM will enable management to analyse and interpret the data for maintenance and conservation planning. Using the framework developed for concrete conservation, we aim to develop a process that can be applied to the conservation of other building materials, such as timber or bronze, even if the testing and monitoring parameters vary. Mobile technology will be utilised to provide maximum portability for using the system on-site.

Further information is available at sydneyoperahouse.com

Lisa Taylor
Sydney Opera House
The Australian Convict Sites mark five years

The Australian Convict Sites Steering Committee (ACSSC) recently celebrated five years since the inscription of the 11 Australian Convict Sites as a serial cultural property on the World Heritage List on 31 July 2010. Federal MP, Eric Hutchinson joined the Committee at the group’s annual face-to-face meeting held at Port Arthur Historic Site on the 7 July 2015 to recognise the five year anniversary, and to assist with the cutting of the convict brick and World Heritage themed cake. Hank Horton, co-Chair of the Australian World Heritage Indigenous Network (AWHIN) was another keynote speaker who addressed the ACSSC on the role and importance of AWHIN in achieving best practice management of World Heritage in Australia.

The July gathering of the site managers and state representatives of the 11 Australian Convict Sites was focussed on setting priority projects so that the ACSSC can tick off initiatives and ‘kick goals’. The ACSSC was enthusiastic about the support that the appointment of the new Executive Officer would provide in assisting the ACSSC to achieve its strategic objectives, and it determined that key projects moving forward include: the development of a ‘Linkages Strategy’ to articulate the connection between the 11 Australian Convict Sites as one World Heritage property; to develop a method of interpreting the connection at each site; and an update of the strategic plan of work priorities, in addition to a commitment to begin to update the Australian Convict Sites Strategic Management Framework (2008) over the next 18 months.

The July meeting also witnessed the completion of David Buffett’s (Kingston and Arthur’s Value Historic Area) tenure as Chair of the ACSSC, with Richard Archer (Brickendon-Woolmers Estates) stepping into the role for the next two years.

To find out more about the World Heritage Australian Convict Sites check us out on Facebook.

Paulette Wallace
Executive Officer
Australian Convict Sites
Engaging communities in the conservation of natural and cultural heritage

Spending two weeks with a group of heritage professionals, eating Italian food, drinking the world’s best macchiatos, while surrounded by stunning natural and built beauty; it seemed like a tough mission but I was willing to take it on.

In October, 20 cultural and natural heritage professionals from 19 counties arrived in Italy for a two-week training course (and some serious pasta eating), on people centred approaches to managing natural and cultural heritage.

The course was conducted by ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property), one of the three official advisory bodies to the World Heritage Committee. ICCROM is an intergovernmental organisation (of which Australia is a Member State) with a mandate to promote the conservation of all types of cultural heritage. ICCROM are known for their cultural heritage expertise which includes conducting training and heritage conservation courses all over the world, that is mainly focused on cultural heritage conservation and restoration training for the built environment. However this time ICCROM teamed up with IUCN (the World Heritage Committees advisory body for natural heritage) and UNESCO to develop a course that brings together the sometimes siloed sectors of cultural and natural heritage.

With a move in recent times towards a more rights-based and participatory approach to World Heritage management and designation, the course has picked up on that momentum and focused on engaging communities in the conservation of both built and natural heritage.

With our various case studies and presentations in hand, there was a good deal of knowledge exchange and networking amongst the participants, as well as a focus on practical tools to assist in community engagement processes. Themes that were covered included the role of heritage in the lives of communities; the reciprocal benefits that can and should be gained by both heritage and contemporary society; the importance of traditional knowledge systems; and the role of heritage in sustainable development. The course was well supported by resource staff from UNESCO, IUCN and heritage experts from various other institutions and universities.

After a week in Rome inside the class room, we headed south to the Bay of Naples for the field and practical components. This included visits to the World Heritage listed sites of Pompeii and Herculaneum, as well as the dominating and beautiful volcano of Vesuvius; a community operated marine heritage park (where you can dive with ancient ruins), as well as catacombs in Naples and the world’s oldest vintage market.

We met and were given talks and tours by the various sites superintendants, protected area managers and importantly, locals who had used existing heritage to not only help protect it, but to also create awareness and turn sites into viable community assets. All in all it was a great fortnight that helped to create a bridge between the natural and cultural aspects of heritage management and to reiterate the importance of involving communities in the management of their heritage.

I would like to thank the Norwegian Ministry of Environment and Climate Change who fully funded the travel, accommodation and expenses for all of the participants; the fantastic ICCROM staff and resource staff; and the wonderful, warm locals who contributed to keeping our brains busy, our stomachs full of amazing food, and coffee at a divine level.

Angie Stringer
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Department of Environment and Heritage Protection, Queensland.

For more information:
ICCROM
World Heritage Magazine article on Nature Culture Linkages
The Gaiola Underwater Park
Catacombs of Napoli
Mount Vesuvius National Park
Archaeological Areas of Pompei, Herculaneum and Torre Annunziata World Heritage site
Keeping Tasmania’s wilderness beaches weed-free

A volunteer program working on Tasmania’s most remote wilderness coastline is achieving impressive results in eradicating the invasive beach weed sea spurge (Euphorbia paralias).

Over 14 million sea spurge plants have been removed from the western and southern Tasmanian coastline, in a project that demonstrates what can be achieved when dedicated volunteers work collaboratively with a land management authority, combining resources to extend capacity.

The program, which operated through Tasmania’s largest incorporated environmental volunteer organisation Wildcare Inc, was called Sea Spurge Remote Area Teams or SPRATS.

“We dropped small groups of bushwalkers out in remote areas using helicopters and light planes, or sometimes they walked to the coast. We trained them and they had GPSs to map the weeds. They worked hard and removed so many weeds. They must have had fun because lots of them came back for several trips. They saw some spectacular scenery too,” said SPRATS coordinator Jon Marsden-Smedley, who set up the program after a pilot project in 2007 to test the logistics of remote area weed control teams.

A total of 600km of coastline, from Macquarie Harbour on the west coast to Cockle Creek in the south-east, has been weeded. About 350km of this coastline lies within the Tasmanian Wilderness World Heritage Area and the rest is within the adjacent Southwest Conservation Area.

By the end of the 2014/15 season, about 14,170,000 sea spurge plants had been removed over nine seasons. The entire length of coastline is now virtually weed-free, although new seedlings will continue to germinate, so on-going low-level control is still needed.

The high quality citizen science that has gone into mapping, monitoring and weed control trials enables estimates to be made of the number of sea spurge plants that need to be removed next season — for this summer, the number is less than 0.5% of the original number.

At least 150 people have been involved with SPRATS fieldwork. By the end of the 2015/16 season, a total of 5,449 person days had been volunteered over nine seasons. Nearly half of the volunteers came from interstate to assist with the program and this season over two-thirds of the volunteers had previously worked with SPRATS.

Weeds are recognised as a key threat to the natural values of the Tasmanian Wilderness World Heritage Area, and sea spurge is amongst the highest priority. Sea spurge has buoyant seeds which survive for several years floating in seawater, so it can be transported long distances in ocean currents, allowing it to colonise remote and otherwise pristine coastlines.

Sea spurge infestations displace native plants and change the natural dune profile by binding sand in a different way from native vegetation. Sea spurge poses a threat to shore-nesting birds and the Tasmanian wilderness coastline provides important habitat for several threatened species including hooded plover, pied oystercatcher and sooty oystercatcher.

For more information, see the Tasmania Parks and Wildlife Service evaluation report: Wildcare SPRATS volunteer weed eradication project for Tasmania’s southwest wilderness coastline at www.parks.tas.gov.au/monitoring

Christine Corbett
Planning and Evaluation, Tasmania Parks and Wildlife Service
Fossil focus at the Australian Fossil Mammal Sites—Naracoorte

From the back of a dark and dusty shed emerges a young man. He’s carrying a plastic box, out the top of which I spy an aged plastic bag containing what looks like an old bone. He takes the box into the laboratory and together we eagerly look over its contents. The old bone I spied is one of tens, if not hundreds, of fossils. The faded writing on the plastic bag reveals they were collected from Victoria Fossil Cave in the 1970s.

Collection Officer, Peter Majoros, has been sorting through the boxes and trays of fossils held onsite at Naracoorte Caves World Heritage Area, recording their invaluable contents. Once collated the records will be integrated into the Biological Databases of South Australia to ensure information about the fossils is available for researchers and Naracoorte Caves staff into the future.

It’s a big task. In some cases the boxes have not been examined since they were packaged up over 40 years ago. This hasn’t bothered Peter though. Many of the researchers who led excavations at Naracoorte have shared their records and notes, making his task that little bit easier. There’s also a strong sense of satisfaction in Peter’s face as he shows me his progress in the shed.

“Part of the Palaeontology course I studied was held at the Naracoorte Caves. My eyes were opened to the immense scientific potential that the collections here hold, and it is a privilege to now be able to work with such significant pieces of Australia’s natural history,” Peter said.

Peter’s work to audit the fossil collections at Naracoorte Caves represents a significant step towards the development of collection management processes at South Australia’s only World Heritage Site. As well as integrating collection information into the Biological Databases, work is progressing on the development of Local Collection Management Guidelines. The guidelines will ensure consistency in how researchers document, store and label collections into the future.

Another significant development is the establishment of a fossil loans procedure for the Naracoorte Caves. The system will mirror procedures used at the South Australian Museum, ensuring best practice in relation to the movement of fossil materials offsite for research purposes.

For now the priority remains on compiling a record of the materials held onsite. But with Peter’s progress there’s no doubt researchers will soon want to explore these long-since excavated fossils to uncover their hidden scientific potential.

The Collection Officer Project is supported by the Department of Environment, Water and Natural Resources through funding from the Australian Government’s National Landcare Program.

For more information, contact Dr Amy Macken, Executive Officer, Naracoorte Caves: 08 8760 1201/amy.macken@sa.gov.au.

Dr Amy Macken
Climate-related declines in the extent of seagrasses in the Shark Bay World Heritage Area

The seagrass meadows of the Shark Bay World Heritage Area (SBWHA) are recognised as one of the outstanding values of the region because of their high diversity and the significant role they have played in the evolution and maintenance of the unique Shark Bay marine environment. The seagrass communities of Shark Bay cover some 3700km² and include the Wooramel seagrass bank which may be the largest continuous seagrass meadow in the world. Seagrasses support a high diversity of fauna including commercially important species such as pink snapper, scallops and blue swimmer crabs. Additionally, the SBWHA supports a large, and probably the most secure, population of dugongs in the world which rely on seagrass for food.

Seagrasses are sensitive marine plants which are under increasing pressure from human use, coastal development and climate change. The seagrass meadows of Shark Bay are currently under threat from climate-related changes in the area. During the summer of 2011, a strong marine ‘heatwave’ event occurred along the Western Australian coast. During this time, sea temperatures in Shark Bay were as much as 4°C above average for a period of approximately four months. Around the same time Shark Bay was exposed to a prolonged flooding event (December 2010–February 2011) which was the most significant of the past decade. The combined effect of these environmental disturbances caused substantial defoliation of the temperate seagrass Amphibolis antarctica and massive dieback in some regions of Shark Bay. These changes affected scallop and prawn fisheries in the region and the condition of green turtles which forage on seagrass.

The Western Australian Department of Parks and Wildlife is currently examining new and historic satellite images in order to map the changes in seagrass distribution as a result of these events. Preliminary results suggest that, of the approximately 2115km² of perennial seagrass mapped in the Western Gulf and along the Wooramel coast in 2002, about 166 km² (8%) were lost by 2014. Of greater concern is the thinning of the canopy of perennial seagrasses from 1700km² classified as dense (>40% cover) in 2002 to only 1000km² by 2014. The long-term impact to seagrass meadows and the flow-on effect to the broader Shark Bay ecosystem of this canopy thinning are unclear however, continued monitoring of seagrass communities and the fauna which rely on them is critical to understanding the severity and significance of these changes to the Shark Bay system.

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Fig. 1  
a) A satellite image (Landsat 5) of the Shark Bay World Heritage Area. This was the base map from which seagrass distribution was mapped in 2002.  
b) The seagrass mapped along the Wooramel seagrass bed in both 2002 and 2014. In these images dark green areas are dense seagrass and the light green areas are sparse seagrass. Note the change in dense seagrass between 2002 and 2014. Images are courtesy of U.S. Geological Survey.
Celebrating Lamington’s National Park’s Centenary

The Queensland Parks and Wildlife Service (QPWS) together with Dr Steven Miles, Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef, marked Lamington’s 100 years as a national park on the weekend of 31 July 2015 with a celebration to end all celebrations.

Part of the Gondwana Rainforest of Australia World Heritage area, over 240 guests attended events such as the opening of the refurbished QPWS information centre in the Green Mountains section, featuring World Heritage area displays, and Dr Miles announcing the expansion of the park by 586ha—the largest addition since the park was declared on 31 July 1915.

Guests were treated to a re-enactment of life on park during the 1930s when gangs first blazed graded tracks during the Great Depression. Their legacy is that today’s visitors can explore the rainforest from within.

Dr Miles honoured the Wangerriburra people, the families O’Reilly, Groom, Lahey, and Rankin, who for thousands of years have held special connections with this landscape. The park’s birthday also falls on World Ranger Day—a day that recognises rangers as the ‘front line’ of conservation around the world—a fitting tribute to Lamington’s past and present rangers.

The excitement of marking 100 years actually started in July 2014 with the opening of a new Python Rock lookout followed in subsequent months by openings of the historic Morans Creek Camp (a forestry track construction camp used from late 1930s to late 1960s), Queensland Naturalists’ Cairn at Bithongabel, the old Foresters hut and display beside the Binna Burra QPWS Information Centre, and launching the Lamington 100th website. This was all made possible by the Department of National Parks, Sport and Racing’s Friends of Parks program and volunteers from the Green Mountains and Lamington Natural History Associations and Bushwalking Queensland.

Celebrations wrapped up in November 2015 with the opening of the park’s first wheelchair-accessible track at Green Mountains. The 900m Centenary track meanders through rainforest and features alcoves with seats.

Lamington National Park was added to the Gondwana Rainforests World Heritage area in 1994, and it stands as a critical piece of subtropical rainforest. At 21,186ha it is the second largest national park on the Scenic Rim, and is renowned for its inherent beauty, ecological importance and special connections.

QPWS would like to acknowledge all those who’ve played a part in protecting Lamington National Park’s history—the connections forged that helped create this internationally recognised landscape.

Visit http://www.lamington100.org.au

Ellen Thyer
Queensland Parks and Wildlife Service
Visitor Management Officer