

TUESDAY 6 SEPTEMBER

6.00 – 7.30 pm	EARLY REGISTRATION AND WELCOME DRINKS
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WEDNESDAY 7 SEPTEMBER

8.30 – 9 am	REGISTRATION	
9 – 9.15 am	Welcome: Dr Martin Woods, President, Australian and New Zealand Map Society	
9.15 – 10.00 am	<p>Keynote speaker</p> <p>The World for a King: Pierre Desceliers' Map of 1550</p> <p>Chet Van Duzer is an independent scholar focusing on the history of cartography. He has worked with a number of significant map collections including those in the Library of Congress, the British Library and the John Carter Brown Library and is a board member of the Lazarus Project at the University of Mississippi. Chet will discuss 'The World for a King: Pierre Desceliers' Map of 1550' and its relationship to the discovery of Australia</p>	<p>In this talk I give an account the large and elaborately decorated manuscript world map made by the Norman cartographer Pierre Desceliers in 1550 (British Library, Add. MS 24065). Following a look at the map's genre, principal characteristics, and the circumstances of its creation as a gift for Henry II of France, I demonstrate the cartographer's greater interest in Asia than other contemporary Norman cartographers; discuss evidence that the cartographer hired multiple artists to decorate the map; and lay out the sources of both the map's illustrations and its descriptive texts.</p> <p>Finally I address the question of whether the map's large southern continent represents a "pre-discovery" of Australia – that is, a discovery of Australia before the generally recognized discovery by the Dutch in 1606 – arguing that it does not; and examine the influence of Desceliers and other Norman cartographers.</p>
10.00 – 10.30 am	<p>Survival of the Joan Blaeu map of New Holland (1663): Historical, physical and ethical challenges.</p> <p>Dr Martin Woods, Curator of Maps and Denyl Cloughley, Manager of Preservation Services National Library of Australia</p>	<p>Dr Martin Woods, Curator of Maps at the National Library of Australia, and Denyl Cloughley, Manager of Preservation Services, explore the acquisition, history and ongoing challenges of preserving the Blaeu wall map of New Holland. This large map has been described by Gunter Schilder and others as the key map in our visual grasp of the Australian continent before Cook. The project to preserve the map, funded by public donations to the 2013/14 exhibition, <i>Mapping our World: Terra Australis to Australia</i>, commenced in May 2016. The Library's decision to preserve a complex object such as a Dutch wall-map wasn't taken lightly. The map faces an uncertain future, with verdigris corrosion of the supporting paper among several agents undermining the map. Verdigris, a brilliant blue-green pigment, was applied to embellish the surface of the map. Over the last 350 years the decoratively applied pigment has corroded to become a brown crust on the surface, damaging the paper underneath and the surrounding areas. The results of analysis informed conservation treatment options that were not insignificant, and fully considered before the treatment was undertaken.</p>
10.30 – 11.00 am	MORNING TEA	
11.00 – 11.30 pm	<p>Marco Polo's Java and Locach on Mercator's world maps of 1538 and 1569, and globe of 1541</p>	<p>Gerard Mercator produced a globe in 1541, showing Marco Polo's Locach, under the variant name <i>Beach</i>, as a promontory of the Southern continent. He identified it with the Regio Patalis, a promontory of the Terra Australis. Mercator's biographer, Nicholas Crane, concluded that the shape Mercator gave to</p>

	<p>Robert J. King (b.1947) is an independent researcher at the National Library of Australia with special interest in European expansion into the Pacific, 16th-18th centuries. He received the Australasian Hydrographic Society's Literary Achievement Award for 2010 in recognition of his contributions to maritime history.</p>	<p>Beach later gave rise to speculation that the north coast of Australia had been visited in the early sixteenth century. The so-called Dieppe maps show a similar promontory of the Southern Continent, called <i>Lucac</i> or <i>Jave la Grande</i>. Did the Dieppe Maps derive from Mercator's 1541 globe, or did they both derive from another common source? Mercator's 1541 globe showed a significant development of his ideas from those set out in the map of the world he produced in 1538. This world map was modelled on that of Oronce Fine of 1531. It was not a mere copy, but incorporated some significant differences, notably with regard to the two Javas and Locach. On his 1541 globe, Mercator moved Locach, under the name <i>Beach</i>, from the Asian continent where he had located it in 1538, to the southern continent. Beach, duplicated as the kingdom of Locach, remained in that location on his world map of 1569, with a description of it drawn from Marco Polo. When the west coast of Australia was discovered by Dirk Hartog in October 1616, it was called Eendracht Land after Hartog's ship and identified with Mercator's Beach/Locach. Mercator's cartography influenced the initial understanding and depiction of Australia. Rather than Mercator's cartography reflecting a discovery of Australia, it was his theoretical cartography that moulded the view of New Holland/Australia when it was discovered.</p>
11.30 – 12.00	<p>Encircled by Land: James Colnett and the Enlargement of the Pacific 1772-1803.</p> <p>Granville Allen Mawer is an independent historian who researches and writes on a wide variety of subjects. He has been a contributor to the Australian and Senate dictionaries of biography and wrote several entries for the National Library's 2013 <i>Mapping Our World</i> exhibition. His major works, several of which have been shortlisted for Premiers' Awards and other important prizes, range from maritime, colonial and local history to biography and have been favourably reviewed in the Times Literary Supplement, the New York Times Book Review and the Australian Book Review. His current project is a biography of James Colnett RN, an important but neglected figure in the opening of the Pacific to European navigation and trade.</p>	<p>Colnett made five Pacific voyages, the first with Cook in 1772-6. He then commanded two sea otter trading expeditions, nearly starting a war with Spain over the Nootka incident when he was arrested by the Spanish. He attempted to reopen European trade with Japan and Korea. He did a whaling reconnaissance to the Galapagos for the Enderbys. He transported convicts to NSW, took back ships' timber and was instrumental in getting Governor King removed. In the 1790s he summed up his career's work as 'enlarging the bounds of commerce and navigation'. I am doing a biography of him as an exemplar of the ways that Britain began to use maritime power to exploit the resources of the Pacific rim and islands in the face of other European powers, the closed doors of the East and the reservations of native peoples.</p>
12:00 – 12:30	<p>Blueback Charts of the Australian and New Zealand Coasts</p> <p>Greg Wood, who now describes himself as "retired", is a Canberra based member of ANZMapS and a somewhat undisciplined map collector. To the extent his cartographic interests are themed it's around the history and cartography created as federated Australia selected its site for a national capital, the maritime mapping of Australia (Matthew Flinders and the commercially published blueback charts are particular favourites) and the inland exploration and mapping of this continent. He has published a</p>	<p>Blueback charts, a loose generic term, were commercially published nautical charts so called because of the blue paper backing used to stiffen and strengthen some of them. Their heyday was the mid nineteenth century, remaining popular even after the British Admiralty started selling its own charts after 1821. In part that popularity was because they distilled onto one, often massive, sheet sufficient up-to-date information about islands, coastline, straits and ports to allow for a safe and successful voyage. Designed to cater to the merchant seaman's needs, some Bluebacks have over a dozen inserts of Australian and New Zealand ports. Aaron Arrowsmith, Laurie and Whittle, Norrie and Wilson, Robert Blachford and James Imray were among the publishers of Bluebacks relating to Australia and New Zealand.</p> <p>This talk will look at some Bluebacks of Australia, some relatively familiar, others maybe unique, certainly not held in any major international collection. Because they were working documents</p>

	number of pamphlets and articles on the first two subjects mentioned.	they often suffered considerable wear and tear, those surviving often ending up in attics and other forms of storage of less than archival standards. Individually and collectively they all tell a story, in a way the more battered the map the more telling. Labels from their original place of sale are an indicator of the industry of the vessel and the owners; yet other charts are annotated with the routes of voyages and events encountered. The published inserts change over time, many speaking to an obvious need, others obscure and puzzling to today's observer, a comment on the shifting history and fortunes of coastal Australia.
12.30 – 1.30 pm	LUNCH	
1.30 – 2.15 pm	<p>Dirk Hartog's landing in Western Australia (1616–2016): An Archaeological and Historical Context</p> <p>Native to Amsterdam, Dr Wendy van Duivenvoorde is a senior lecturer in maritime archaeology at Flinders University and deputy director of the Australian Consortium of Humanities Research Centres. She is also affiliated faculty with the Institute of Nautical Archaeology at Texas A&M University. Dr van Duivenvoorde's research primarily focuses on ships of exploration and Indiamen, and includes the archaeological remains of Western Australia's Dutch East Indiamen shipwrecks.</p>	<p>This year marks the quadricentennial of the first confirmed European arrival in Western Australia. On 25 October 1616, Dutch skipper Dirk Hartog and his crew landed at the northern tip of what is known today as Cape Inscription on Dirk Hartog Island in Shark Bay. One of the most significant early European sites in Australia, his crew left behind a pewter plate as a testimony of their arrival and departure.</p> <p>This presentation discusses Hartog's life, his reputation and experience as an accomplished seafarer, and even suggests that he purposely navigated into Australian waters. It also investigates the archaeological and historical context of the Hartog Inscription Plate—now featured in the Rijksmuseum collection. Emphasising the nature of similar monuments left by European explorers in the Indian Ocean region and contemporary ship communication practices, it places Hartog and the Inscription plate into the broader setting of seventeenth-century Dutch seafaring activities and exploration.</p>
2.15 – 2.45 pm	<p>Measured Works : Surveyors' Views of Early European Settlement in Wellington.</p> <p>Mark Bagnall National Library of New Zealand</p>	<p>In January 1840 a surveying team arrived with instructions for laying out a model and modern English settlement on the shores of Te Whanganuia-Tara, or Port Nicholson, where Te Āti Awa, Ngāti Tama and other Taranaki peoples were already settled. Within weeks the first New Zealand Company settlers arrived to find that land subdivision had barely begun. Poorly resourced, and amid rising tensions among New Zealand Company officials, settlers and local Māori, surveyors got to work. This talk explores the beginnings of the city of Wellington through the plans, artworks and writings of early surveyors.</p>
2:45 – 3:15	AFTERNOON TEA	
3:15 – 3.45 pm	<p>Mapping a Coastal Community in Colonial NSW: Sydney. From a Gaol via a Nodal city to an international Centre.</p> <p>Professor Robert Clancy Professor of Pathology; retired Director of Immunology, John Hunter Hospital; founder of Hunter Immunology Ltd. Emeritus Professor, Faculty of Medicine & Health Science. Passionate about contemporary maps as documents of history with particular interest in Australia and Antarctica. Written four books on early maps of Australia and Antarctica, numerous articles, curated several exhibitions and given many talks to professional and non-professional groups.</p>	<p>The cartographic record of colonial Sydney illustrates change from an isolated English penal colony of one thousand, to an independent international centre of half a million. The objectives of this presentation are, by review of the histocartography, illustrate</p> <ul style="list-style-type: none"> • the evolution from a penal colony (1788-1840) via a 'nodal city' passaging rural product, to a regional centre, but with chaotic disconnect between residential, commercial, and servicefunctions • the switch from a small walking city with a supply network occupying the Cumberland Plain, to an urban/suburban complex absorbing its immediate hinterland as 'railway' suburbs. <p>Eleven maps will be shown to illustrate urban change from Arthur Phillip's plan for Albion (Sydney) based on mythology, to a map from Parliamentary papers showing the distribution of Bubonic Plague around Darling Harbour in 1901 in a congested and dysfunctional city, an event that would force review of urban renewal. Particular comment will be made on a map by Thomas Mitchell published with the "New Calendar &</p>

		Directory" (1831). It shows a self-sufficient colony with a maritime focus and the beginnings of adjoining 'suburbs'. It represents a watershed between the publication of maps in Europe and Australia, as it is the first commercially printed map in the Australian colonies. Later maps illustrate the impact of discovery of gold, and the outcome of increasing political independence and the arrival of steam transport (1855) and the development of sophisticated map publishing
3.45 – 4.15 pm	<p>'Investigation... had not been greatly extended': the official and unofficial exploration of the NSW coast from Matthew Flinders to Richard Craig, 1795 – 1840</p> <p>Ian Hoskins North Sydney Council Historian</p>	<p>When an adventurous Matthew Flinders arrived in Sydney in 1795 he immediately noted that the limitations of exploration of the coastline that had been charted and claimed for the King in 1770. He would famously, of course, set about rectifying that with friend and fellow adventurer George Bass in the tiny vessel Tom Thumb and later on official voyages in the <i>Norfolk</i> and the aptly christened <i>Investigator</i>. Indeed, early colonial British discoveries along the New South Coast resulted as much from misadventure, personal curiosity and chance as official intent. The knowledge of the present-day NSW coast that Flinders gleaned was bettered by the information gathered by shipwrecked sailors and escaped convicts such as the remarkable 'absconder' Richard Craig.</p> <p>The role played by chance and accident in the exploration and subsequent occupation of the NSW coast is an interesting corrective to heroic narratives of voyaging, particularly that of Flinders, which tend to dominant historical accounts – both academic and popular.</p>
4.15 – 4.45 pm	<p>Adaptive change to the coordination and service delivery of the Map Collection at State Library Victoria</p> <p>Sarah Ryan, Coordinator, Collection Development & Discovery State Library of Victoria</p>	<p>This presentation will focus on the process and implications of two major adaptive changes that have been recently implemented at the State Library of Victoria. One being the transference of responsibility for the Map Collection from what was formerly known as the Rare Books team to the Victorian & Australian Published Collections team. The other is the introduction of a centralised information point for the public. This involved combining two service desks into one. All librarians working front of house are now expected to answer any enquiry that comes across the desk whether it be general or relating to a specialised collection like Maps. Both these changes are enabling a broader pool of staff to develop knowledge of the Map Collection. This will ensure that we are well placed for succession planning in the future.</p> <p>Sarah started working at State Library Victoria as a graduate librarian in 2011. She spent time working in the Digital Access and Rare Printed teams and secured an ongoing position in 2012 with the Victorian & Australian Published Collections team. In 2015 she was appointed as Coordinator of the Map Collection</p>

THURSDAY 8 SEPTEMBER

9 – 9.45 am	<p>Keynote Speaker James Cook's use of the Running Survey</p> <p>John Robson is the Map Librarian at the University of Waikato in Hamilton, New Zealand. He is a member of the Captain Cook Society and the NZ representative for the Hakluyt Society. In 2009 he published <i>Captain Cook's War and Peace</i> about Cook's early</p>	<p>While not inventing the technique of Running Survey, James Cook quickly mastered its use during his time in Newfoundland waters. He then used it to great effect in the Southwest Pacific producing the charts of New Zealand (first voyage) and Vanuatu / New Hebrides (second voyage). The technique will be described using examples from Cook's work</p>
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	Royal Navy career. John will discuss James Cook's use of running surveys, which were used to great effect in the south-west Pacific producing the charts of New Zealand (first voyage) and Vanuatu–New Hebrides (second voyage)	
9:45 – 10:15 am	<p>Colonial Cartography and Copyright Law</p> <p>Isabella Alexander, Faculty of Law, University of Technology Sydney</p>	<p>Colonial surveying and mapmaking are frequently characterised as mechanisms of imperial appropriation and control. When lawyers are interested in maps, it is usually for what the map can tell them about the property rights it represents or perhaps, as Dorsett does, they see it as a 'technology of jurisdiction' (Dorsett, 2007). Much less attention has been paid to property in the map itself, or in the information embodied in it, despite the fact that questions of whether this information is owned by the state, by the public or by private enterprise frequently gives rise to debate. This paper starts to explore some of these questions by looking at several nineteenth century disputes over the copying of maps and geographic information both before and after the passing of the first copyright statute in Victoria in 1869. Only three years after this act was passed, a case was brought before the District Court involving a dispute over the alleged piracy of a mining map of Sandhurst. This was one of the first copyright cases in the colonies, but it was not the first time disputes had arisen over the use and misuse of geographic information. Two earlier disputes, the first between Thomas L Mitchell and one of the surveyors working for him, Robert Dixon, and the second involving Frederick Proeschel's goldfields maps, also involved allegations of piracy and unauthorised use of geographic data. Examining these three cases in light of the legal landscape of copyright law, this paper considers what such a perspective can bring to the study of early Australian mapping, as well as to early Australian copyright law.</p>
10:15 – 10:45 am	<p>Southern views: documenting landscape</p> <p>Elise Edmonds State Library of New South Wales</p>	<p>Along with explorers, surveyors and cartographers, artists have also documented Australian coastal landscapes. Sometimes accompanying expeditions, or exploring by themselves, many artists travelled south to depict the topography, landscape and coastlines of New South Wales. The State Library of New South Wales collection of original sketches, watercolours and oil paintings depicts the south coast at the point of European settlement.</p> <p>This paper will focus on a number of significant colonial artists, such as Eugene von Guerard, John Skinner Prout, Conrad Martens and Frederick Garling along with artist-surveyors who ventured beyond the Sydney settlement to capture the picturesque, natural landscapes of the Illawarra and Shoalhaven areas. This paper will explore these landscape works and seek to relate them to the State Library's collection of original manuscript maps of the region, placing the works within a cartographic context.</p> <p>Elise Edmonds, senior curator, Research & Discovery, State Library of New South Wales</p>
10:45 – 11:15	MORNING TEA	
11:15 – 11:45 am	<p>Mapping Aboriginal Australian Languages: Weemala Interactive</p> <p>Paula Bray and Kirsten Thorpe State Library of New South Wales</p>	<p>The State Library of NSW holds many significant collections relating to the history and experiences of Indigenous Australian people and communities. These materials reflect the earliest interpretation of the history, language, art and culture from first contact through the present day. These works were for the most part collected from third parties - colonisers, missionaries, travellers, policemen and others - who documented the lives and culture of Indigenous people. Amongst these collections are significant records relating to Indigenous Australian</p>

		<p>languages, which were digitised and made accessible as part of the <i>Rediscovering Indigenous Languages</i> project. Over the past five years, the Library has developed a renewed focus on making Indigenous Australia collections accessible. The Library acknowledges that its collections are vital sources for Indigenous Australian peoples in connecting with their history, culture and language. The most recent effort has been a collaboration between the Library's Indigenous Services team and the DX Lab, to utilise data from the <i>Rediscovering Indigenous Languages</i> project and Library transcription tool to build Weemala (which means 'a big lookout' in the Sydney language). This exciting new interactive interface uses 100 year old survey data to map the location and meaning of Indigenous Australian place names across NSW.</p> <p>This paper will discuss the development of Weemala and discuss the collaboration that took place to develop the interactive. It will also look to the future to imagine further use of digital content to expose historic collections online.</p>
11:45 – 12:15 pm	<p>Understanding Aboriginal cultural landscapes in the Illawarra: the role of historical maps</p> <p>Dr Bess Moylan is a certified GIS professional who is a mapping teacher at TAFE NSW in Wollongong. She has a background in Surveying, and experience in Environmental mapping. Her current research interest is cultural landscapes. Bess is interested in people's connections to landscape, and in particular how historical maps and aerial photos can be used to help explore these connections.</p>	<p>Historical maps from the Illawarra area contain information about the landscape that predates European influence. This paper investigates how they might contribute to the understanding of Aboriginal cultural landscapes in the Illawarra. Three cultural landscape themes are explored by reviewing information extract from historical maps and related surveying records.</p> <p>The first theme is the process of naming features as part of the European exploration process. A review of early NSW coastline maps is used to compare the aboriginal landscape view with that of the European explorer view. The second theme is that of road development into the area. Maps and survey records are reviewed to investigate the link to older trails that predate Europeans. The third theme is that of land use. Landscape features in parish and town maps are used to identify a range of cultural landscape links relating to land use. Features identified include swamps, hills, vegetation, waterways, and sand dunes. Of particular interest is role that historical maps play in identifying landscape features that now no longer exist due to landscape modification processes.</p> <p>At a minimum, historical maps provide valuable spatial context to early European observations of the Illawarra Aboriginals. More importantly, historical maps can be used beyond their original purpose and can be reappropriated to inform a broader view that includes Aboriginal cultural landscapes. The investigation suggests that in depth analysis of historical maps can contribute a greater understanding of the complexity of features that make up the Aboriginal cultural landscape in the Illawarra.</p>
12:15 – 12.45 pm	<p>Storytelling and Science: The mapping of coastal South Australia and 'Ultima Thule' Kangaroo Island</p> <p>Kelly Henderson Independent Researcher</p>	<p>This paper traces recording and shaping of South Australia's coastal landscape, from legendary and indigenous narrative sources and symbolism and early European depictions of Australia, to Malayan-born William Light's 19th-century invention of the world's first co-ordinated cadastre, defining the original coastal reserves, Country Sections, and transport network of South Australia's capital, still evident in today's maps.</p> <p>Long before European and Eurasian explorers charted Australia's coast, aboriginal Dreaming stories and songlines created memory maps of coastal and landscape features, islands, cultural routes and tribal boundaries. Tales of Ngurunderi, Tjilbruki, Kondili the Whale, and the Isles of the Dead, among others, orally preserved South Australian mapping information, surviving to be translated into the printed word, or memorialised, in part, on charts of European explorers and surveyors.</p>

		<p>A heavily indented coastline with protected Spencer (<i>Bonaparte</i>) and St Vincent (<i>Joséphine</i>) Gulfs, and Ngurunderi's river – mapped by explorer Charles Sturt and named 'River Murray' – attracted the interest of English philosophical radicals and colonial reformers seeking a site for the first practical test of their Wakefieldian / Benthamite 'Great Experiment in the Art of Colonization' (later extrapolated to Western Australia and New Zealand). Requiring 'survey before settlement', systematic colonisation's experimental new British Province was constitutionally excised from the rest of Australia and declared 'Public Lands'. Explicitly established preserving the rights of its indigenous peoples, from first instance this eutopian Province was not <i>terra nullius</i>.</p> <p>Equipped with guidelines and state of the art scientific survey equipment, Surveyor-General William Light, Leader of the Colonization Commissioners' 'First Expedition', was given sole responsibility for maritime and land survey and site selection and design of the capital, Adelaide, and used seaborne and terrestrial trigonometrical stations in his initial subdivision of its surrounding district and transport network.</p>
12.45 – 1.45 pm	LUNCH	
1.45 – 2:15 pm	<p>The Australian Hydrographic Service</p> <p>L Pietrini Australian Hydrographic Service</p>	<p>The Australian Hydrographic Service (AHS) collects, manages and disseminates a vast amount of hydrographic information with published paper charts and Electronic Navigational Charts (ENC) of Australia, offshore islands and waters around Papua New Guinea.</p> <p>Ensuring safety of life at sea requires the collection and dissemination of hydrographic data. Incidents resulting from a lack of accurate data are potentially catastrophic in terms of loss of human life, economic loss, maritime security and degradation of the marine environment. The AHS is also the Australian Defence Force agency responsible for the provision of maritime data and products for military operations, exercises and support roles.</p> <p>The evolution of charts and the process used to compile paper chart and ENC products will be discussed. The recent updating and re-scheme of Gladstone Port charts to improve their suitability and accuracy for safer navigation will be used as a case study. A re-scheme of charts at various scales has been developed to provide a fit for purpose tool for navigation by adding a larger compilation scale. This has increased the detail through the dredged channels which have been updated to accommodate the expanding volume in shipping traffic, in terms of both vessel size and visit frequency. This compilation process is likely to be the first of many similar charting re-schemes as eventually ports around the region will request to follow suit.</p> <p>The chart production process has been evolving as the AHS has introduced new cartographic tools for product compilation. ENC compilation uses CARIS Hydrographic Product Database which allows features to be applied once and represented through multiple scale levels. This improves efficiency and consistency of data during compilation and maintenance. Paper chart compilation uses CARIS Paper Chart Composer which gives the compiler the ability to convert the published ENC file into a paper chart by portraying the ENC features as INT1 symbols which agrees with international charting standards.</p>
2:15 – 2:45	<p>Cox's Road Maps</p> <p>Matthew McRobert Manager – Graphic Services Spatial Services Department of Finance, Services & Innovation</p>	<p>This paper will provide a brief history of the crossing of the Blue Mountains and the subsequent "building" of Cox's Road as well as a brief history of Graphic Services (GS) and our role within Land and Property Information and the map publishing industry in Australia. Background will then be provided on how GS became involved in the project with the Bathurst Historical Society and the Cox's Road Dreaming Project Team. The paper will cover the 'discovery' of Stone Paper and the production of maps using Stone Paper</p>

2.45 – 3:15 pm	<p>Unrecovered War Casualties</p> <p>Major Scott. J. Heiman Research Officer Unrecovered War Casualties - Army Army Headquarters</p>	<p>Unrecovered War Casualties – Army (UWC-A) investigates all notifications of the discovery of human remains that are believed to be those of Australian soldiers. The unit also responds to reports or information that may lead to the recovery of human remains of Australian servicemen.</p> <p>Investigations are usually initiated because human remains have been discovered and there is evidence that they may be those of an Australian serviceman. An investigation may also be initiated when UWC-A receives a submission that alleges the location of human remains (usually buried) of Australian servicemen. All investigations are thoroughly investigated and investigations may last several months or years.</p> <p>The UWC-A GIS project originally mapped out the last known location of unrecovered Australian servicemen in Papua New Guinea. This was then overlaid onto a commercial satellite image of the area in question. More recently additional layers have been overlaid to support the investigation such as relevant war time aerial photography, maps and datum the ground troops were utilising at the time. These were then geo-referenced allowing for the adjustment of the soldier's last known location to correct faults in historical mapping.</p> <p>The next evolution will consist of field trials with electronic versions of the product and GPS. This will assist in adding another layer of collaborative evidence to the investigation; such as discriminating against reports of discoveries of human remains and short listing their possible identities.</p>
3:15 – 3:30	AFTERNOON TEA	
3.30 – 4.00	<p>QTopo</p> <p>Matthew Langley Senior Spatial Information Officer</p>	<p>Queensland's Department of Natural Resources and Mines has provided hardcopy topographic maps covering Queensland since the 1950's. Traditionally these topographic maps were paper based, were time consuming to produce, and not updated on a regular basis. In addition, certain map scales only covered certain parts of Queensland. With modern web mapping technology and Queensland's open data strategy, QTopo was created.</p> <p>QTopo is a free, publicly available, topographic mapping application that allows users to virtually explore Queensland's topography as well as print standard and custom topographic maps. Unlike the previous paper based topographic maps that covered only parts of Queensland, QTopo covers the whole state.</p> <p>This presentation will outline the process undertaken to create QTopo, including:</p> <ul style="list-style-type: none"> · The history of QTopo and how it was established · Data sources used in QTopo, and how they fit in with Queensland's open data strategy and other whole of government initiatives. · The digital map making process and it's challenges · Generating and printing traditional style topographic maps and custom maps · An overview of the application from a systems point of view · Usage, statistics and distribution of map downloads, how we use this information to improve QTopo · Some of the interesting uses people have for QTopo

4.00 – 4.30 pm	<p>Mapping coastal dunes with remotely piloted Aircraft</p> <p>A. Steiger and P. Cornish Cardno NSW/ACT Pty Ltd</p> <p>Amy Steiger has a Bachelor of Science majoring in Land and Heritage Management and has been working in the spatial industry for over 9 years. She has broad experiences in spatial and environmental sciences through her role at Cardno and her skills in spatial technology particularly relate to cartography, data management, spatial analysis, web mapping and mobile GIS. Amy has more recently become involved in aerial mapping and surveying through the use of remotely piloted aircraft systems (RPAS) or unmanned aerial vehicles (UAVs).</p>	<p>While remotely piloted aircraft (RPA) or unmanned aerial vehicles (UAVs) have become more commonplace in recent years, many industries are still only just beginning to tap into what the technology can be used for and what monitoring goals this technology can help achieve.</p> <p>Traditionally, aerial surveys might often incur higher costs, meaning that data capture programs were more viable only for larger projects. Now, RPAs can map small to medium areas for lower costs, and still supply clients with high resolution, high accuracy geo-referenced orthophotography and digital terrain models (DTM).</p> <p>In conjunction with Newcastle City Council, Cardno has captured aerial survey using the eBee RTK platform, a survey grade remotely piloted aircraft to capture high resolution elevation and aerial photography along Stockton Bight Sand Dunes. These dunes are frequently used for 4WD and recreational activities and are an important coastal asset for Council to manage. Data provided to Council will be used by the city for sand and dune migration studies as well as a baseline for change detection and monitoring into the future.</p>
4.30 – 5.00 pm	<p>Coal, Maps and Mining in the Wollongong District since 1797</p> <p>Dr. Robert Young, who retired as Assoc. Prof. of Geoscience at the University of Wollongong, has been actively involved in environmental research in this region since the 1960's. His latest publication is <i>This Wonderfully Strange Country: Rev. W.B. Clarke Colonial Scientist</i></p>	<p>From the 1840s until the last decade or so the development of the Wollongong district has been closely linked to coal mining and associated heavy industry. Coal appears on a map by Flinders and Grimes in 1797 and again on Flinders' map of Australia, but the first detailed map of the geology of the area was by Thomas Mitchell in 1834, and was extended in a map based on observations by Dana and Clarke in 1840. Geological detail was later added in mapping by Clarke that culminated with his map of N.S.W. in 1882. The expansion of mining led to periodic revision of maps by N.S.W. Geological Survey summarised in the Southern Coalfields Map of 1999. A second series of maps shown here, taken from <i>Urban Illawarra</i> published in 1974, details the rise and incipient decline of mining in the region since 1862. The conflict between mining and environmental concerns over regional water supply during recent decades was most strikingly summarised in map form in 2015.</p>
5:00 – 6:00 pm	ANZMapS AGM	
	CONFERENCE DINNER	

FRIDAY 9 SEPTEMBER

9.30 – 3 pm	Field Trip	<p>Details to be finalized. The field trip will include an overview of the map collections in the Local History collection of the Wollongong Library and an introduction to services and collections held at the Australian Hydrographic Office.</p> <p>Lunch provided</p>