

Geological Society of Australia – WA Division 2010 Annual General Meeting



*The Irish Club, 61 Townshend Rd, Subiaco
6.00pm, Wednesday 7 April 2010*

MINUTES 2010: Meeting opened at 18.00 by the Chair, Chris Yeats (CY).

- Apologies: Peter Cawood, Andy Spate, Douglas Allen, Malcolm McCulloch, Ian Fitzsimons, Craig Buchan, Jocelyn Thomson, Roger Hocking, Margaret Brocx, Erin Gray, Stephen White.
- Minutes of the 2009 AGM were made available on the Division website at <http://wa.gsa.org.au/> and on the night – there were no objections and the minutes were approved.
- Chairman's Annual Report 2009-2010 – all reports were tabled at the meeting and are attached to these minutes. They are also available in the April/May WAG, and on the Division website. CY gave a summary of the main points of the chairman's report.

A number of members expressed concern about the lack of consultation around the Society's climate change statement. CY advised that comments would be invited in a forthcoming issue of TAG. A motion was moved from the floor and carried with no nay votes that the WA Division requests that the National Executive conduct an online poll of all members asking whether they agree or disagree with each of the statements and recommendations contained within the GSA Position Statement on Greenhouse Gas Emissions and Climate Change and respond in line with the feedback so received, up to and including a retraction of the position statement.

- WAG Report 2009-2010 - CY gave a summary of the main points

A number of members expressed concern about the new online WAG format. John Bunting requested a survey to explore the sentiments of members on this issues, and suggested that the pdf be included with the notification email. CY noted that this would slow down reception of email for those with slow download speeds. An alternative would be to include the front cover as a pdf. CY suggested that a survey could take place after a settling period of about 12 months. Another member queried the download numbers but data on that issue is not available at this point.

- Subcommittee Annual Reports 2009-2010 - CY gave a summary of the main points of each of the following:
 - Awards
 - Geological Heritage
 - Stratigraphic Nomenclature
- CY showed a table of the current committee; welcomed Alyssa Josephs as the new Curtin rep. Invited more people to join the committee.
- New Members: No new members.

- Other Business:
 - Annual Dinner on April 16th – CY showed the details for the dinner and awards presentation; 3-course meal and drinks for \$80 pp at the Old Brewery.
 - Upcoming talks: CY thanked the current committee and encouraged participation from the audience.
- Meeting closed at 18.25, followed by the seminar
- Seminar:

Controls on gold mineralisation in the Murchison domain: Implications for the evolution of the Yilgarn craton from mapping macro- to microstructure, geochemistry and geochronology

Nick Timms
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Abstract

Studies of the Eastern Goldfields have guided most of the current models of the tectonic evolution of the Yilgarn craton. In contrast, the Murchison domain to the west has received comparatively little attention. New research programs by the Geological Survey of Western Australia and recent mineral exploration efforts highlight renewed interest in the Murchison. This study presents detailed geological field mapping in the Meekatharra greenstone belt 12km south of Meekatharra, east of the large-scale NW-trending dextral Meekatharra shear zone and north of the Archaean Norie pluton.

Mapping shows that gold mineralisation is hosted in a range of rock types and that its location is strongly controlled by complex and heterogeneously distributed macroscopic structures. Sparsely preserved early regional-scale inclined, isoclinal folds with heterogeneously developed layer-parallel foliation are followed by upright NNE-NNW trending folds with hinges that plunge shallowly to the N and S. Progressive deformation of upright folding has led to the development of steeply-dipping, dominantly reverse dextral fault/shear systems with moderate strike continuity approximately parallel with the fold axial planes.

Gold mineralisation is characterised by complex overprinting of ductile (shear zone style) and brittle (lode style) structures. In the shear zone style mineralisation, pervasive zones of metasomatism and associated low-grade gold mineralisation (< 0.7 g/t Au) have resulted from gold-bearing fluid that has exploited the vertically connective fault/shear systems. Vein-related high-grade lode gold is associated with zones of intense, variably orientated quartz +/- carbonate +/- chlorite veining, commonly with sulphides within veins and/or their selvages. Such high-grade lodes tend to overprint rocks with coarse textures at structurally complex sites.

Numerous small-scale felsic porphyry dykes and sills with different phenocryst phases have intruded along and across structures that have controlled gold mineralisation early during their development. SHRIMP U-Pb geochronology of numerous pre-, syn- and post-mineralisation felsic/intermediate ‘porphyry’ intrusions provide key timing constraints for deformation and associated gold mineralisation events. Whole rock geochemistry of these

intrusions and other host rocks in the area provide a tectonic context for mineralisation. These results are discussed in context of intrusion ages of granite in the immediate vicinity of the greenstone belt in the Murchison domain, and similar rocks from the Eastern Goldfields, which have guided most of the proposed tectonic models for the tectonic development of the Yilgarn craton.

Biography

Nick's expertise primarily lies in structural and microstructural geology. Nick is an accomplished field geologist, and has extensive experience in a variety of micro-analytical techniques, including the development and application of electron backscatter diffraction for geological materials. Nick graduated from the University of Liverpool in 1997, and gained his PhD from James Cook University in 2002. Nick joined Curtin as an Australian Research Council (ARC) Linkage International Postdoctoral Fellow in 2004 and was involved with a subsequent ARC Discovery Project investigating the effects of deformation on the geochemistry of zircon. The research presented in this seminar was done while he was on secondment to Mercator Gold Australia and a subsequent Curtin research grant. Nick is currently a senior researcher in the Western Australia Geothermal CoE, and currently lectures in structural geology and field mapping at Curtin University.

Chairman's Report 2009-2010

Chris Yeats

Geological Society of Australia – Western Australia Division

It is with great pleasure that I present this, my third, and hopefully penultimate, report as Chairman of the Western Australian Division of the Geological Society of Australia (GSA). As generally happens every two years, the 2009 Annual General Meeting marked a changing of the guard in the Committee of the Division. However, with nobody else stepping forward to take on the role, I agreed to seek another 2 year term as Chairman and was re-elected. The 2011 AGM will again see a renewal of the Committee, including a new Chair, and with that in mind I would urge members to consider joining the Committee now, with an eye to taking on leadership roles in a year's time. The current Committee includes a significant number of members, myself included, who have served for over 5 years. Although being a member of the Committee isn't very onerous, we can't do this forever – we need new blood!

The past year has seen a number of important events affect the Division. After a long and sometimes torturous courtship, the planned marriage between the GSA and Australian Institute of Geoscientists (AIG) was cancelled unceremoniously late last year, when the newly elected Governing Council of AIG decided not to put the merger proposition to their members for a vote. This decision, which on the face of it appears to be very shortsighted, effectively means that the Australian geological community will continue to be represented by two organizations – one seen incorrectly as “academic” and the other as more focused on the minerals industry. In the wake of the failed attempt to merge, the National Executive of the GSA is undertaking a review of the Society's operations, and we will see changes proposed to the GSA National Council, which will sit during the Australian Earth Sciences Convention (AESC) in Canberra later this year.

A second change to affect the Division was the decision, effective from the first issue of 2010, to move the Division's bimonthly newsletter, the *West Australian Geologist* (WAG), to online publication only. This decision was driven by a desire to reduce postage and printing costs, while retaining the high quality of the publication. A request for feedback on the decision, published in the October-November issue of WAG, attracted no comment. The move to online publication allows us to retain the current high quality of WAG, with the following benefits:

- Reduction of printing and postage costs to \$0.
- The ability to include colour images and more flexible formatting.
- Significantly reduced workload for the WAG Editor.
- Less pressure on the WAG Business Manager. We will still sell advertising space, but will have more flexibility in format and pricing and additionally there will be no requirement to cover costs – advertising in WAG would provide a profit to the Division.
- Reduced environmental impact. Members can print WAG if they wish, but we believe that many will chose to view it electronically.

On the subject of environmental impact, a decision by the National Executive of the GSA to issue in July 2009, on behalf of the Society, a position statement and recommendations on greenhouse gas emissions and climate change drew a mixed response from our members, to say the least. The statement primarily promoted the need to incorporate good quality palaeoclimatic information, delivered by earth scientists, into any forecast of future climate change. However, a significant number of GSA members believed that a recommendation contained within the document that “... strong action be taken at all levels... to substantially reduce the current levels of greenhouse gas emissions and to mitigate the likely social and environmental effects of increasing CO₂...” went too far, and a small number of members have resigned from the GSA in protest. In hindsight, I'm sure the Executive would agree that the degree of consultation with the membership over this issue during the

drafting process could and should have been better. For those of you who may have missed it, the statement was published in the September issue of TAG, which may still be viewed on the GSA website (<http://www.gsa.org.au/pdfdocuments/publications/TAG152.pdf>).

The Committee has worked hard to maintain a varied program of monthly meetings (Table 2) with talks by a mix of speakers from academia, government, and industry covering a diverse range of topics including lunar exploration, the origins of life on earth, stromatolite biostratigraphy and of course mineral and energy resources. Details of the talks, including abstracts, are available on our Divisional Website, which has an archive of talk abstracts stretching back to August 2004. I would like to thank all this year's speakers for their efforts and time, and for the enthusiasm that all brought to their topics.

The 2009 Annual Dinner and Award Presentation was held on Friday May 8th at the East Fremantle Yacht Club and attended by over 140 people, including the winners of all four Divisional Awards. Numbers were no doubt boosted considerably by the fact that the winner of the Gibb-Maitland Medal, Philip Commander, retired from the WA Water Authority on that day, so the function doubled as a send-off for him. The 2010 Dinner will be held on Friday 16th April at the Old Swan Brewery, and once again the Division is presenting all four awards this year (Table 3). Mary Hewitt and Simon Wai are the 2010 winners of the WACE Prize and GSA Medal respectively. Three excellent theses from UWA were considered for the Talbot Prize, with a unanimous decision to award the prize to Aaron Benincasa, for his thesis "The Geology of Mount Mundo Perdido, East Timor". I also am pleased to announce that Dr. Timothy John Griffin, Executive Director, Geological Survey of Western Australia, will be awarded the 2010 Gibb Maitland medal for his substantial and sustained contribution to geoscience in Western Australia, through both his personal research contribution and his leadership during his 30 year career in the Geological Survey. Further details of Tim's achievements are summarised in the Awards Subcommittee report. I look forward to a large turnout to help Tim and the other awardees celebrate on April 16th.

Following on from his receipt of the W.R. Browne Medal at the Perth AESC in July 2008, Dr Jim Ross was again honoured this year. Jim was appointed a Member of the Order of Australia in the 2010 Australia Day honours. The citation includes his "service to geoscience through advocacy of mineral interests (and) leadership in developing research and education."

The Division once again supported the annual GSA-AIG Christmas Cruise along the Swan River, held in early December, which was yet again sponsored by Southern Geoscience Consultants and attended by a large number of WA geoscientists.

On the financial front, the Division recorded a loss of \$6,775 for 2009. Although clearly this is not a result we can afford to repeat on a regular basis, the overall financial position of the Division remains healthy, with total equity of over \$78,000. It should be remembered that the GSA exists to promote geoscience in the community and serve the needs of its members, rather than return an annual profit. Significant expenses for 2009 included WAG printing and postage costs of \$6,972, a \$5,000 donation to the Australian Student Mineral Venture, and event subsidies to members totaling \$6,237. The last of these items was much higher than usual and was driven by the large turnout to the Annual Dinner, which is heavily subsidized. With significant savings resulting from the move to online WAG and a re-examination of the pricing policy for the Annual Dinner, we expect the Division to return a profit in 2010.

As we move into 2010, we have the Canberra AESC (has it really been 2 years since Perth?) to look forward to, and many of our members will be soon enjoying the spoils of what appears to be a strong resurgence in the resources sector. It'll be interesting to see where we are in 12 months time.

In conclusion, I would once again like to thank my fellow Committee members for their hard work over the past twelve months. In particular I'd like to thank Katy Evans, who added the responsibility of Treasurer to the key (and most time consuming) role of Secretary a couple of months after the

AGM. All of us have significant family and/or work commitments, but all have proved more than willing to commit their time to the activities detailed above. It's been a pleasure working with you.

Table 1 – DIVISIONAL COMMITTEES

Position	2008-2009	2009-2010
Chair	Chris Yeats (CSIRO)	Chris Yeats (CSIRO)
Vice Chair	Marcus Willson (Australian Mineral Fields)	Nick Timms (Curtin)
Secretary	Catherine Spaggiari (GSWA)	Katy Evans (Curtin)
Treasurer	Peter Haines (GSWA)	Katy Evans (Curtin)
WAG Editor	Janet Muhling (UWA)	Janet Muhling (UWA)
WAG Business Manager	Peter Haines (GSWA)	Peter Haines (GSWA)
Committee	Craig Buchan (Task Geoscience)	Craig Buchan (Task Geoscience)
	Craig Hart (UWA)*	Chris Kirkland (GSWA)
	Erin Gray (Curtin Student)	Erin Gray (Curtin)
	Russ Gregory (UWA Student)	Catherine Spaggiari (GSWA)
	Katy Evans (Curtin)**	Alyssa Josephs (Curtin Student)
	Chris Kirkland (GSWA)**	Lachlan Nally (UWA Student)
		Steven White (GSWA) ⁺
	*Left Committee during the year	⁺ Joined as WAG Editor during the year
	**Joined Committee during the year	
Sub-Committee Convenors:		
Awards	Charles Butt (CSIRO)	Charles Butt (CSIRO)
Education and Vocation	Vacant	Dianne Tompkins (ESWA)
Geological Heritage	Margaret Brocx (Consultant)	Margaret Brocx (Consultant)
Stratigraphic Nomenclature	Roger Hocking (GSWA)	Roger Hocking (GSWA)

Table 2 – MONTHLY MEETINGS, MAY 2009 – APRIL 2010

2009		
6 May	Brent McInnes	Space 2020: To the Moon and Beyond.
3 June	Graham Begg	Lithosphere evolution, geodynamics and metallogeny.
1 July	Rob Hough	Revealing the hidden gold distribution in regolith and hypogene samples.
5 August	David Leach	Sediment-hosted Pb-Zn deposits in passive margin environments.
2 September	David Wacey	The quest for the earliest signs of life on Earth.
7 October	David Lumley	Geophysical monitoring of WA energy projects.
4 November	Moyra Wilson	Environmental and tectonic influences on SE Asian coral reefs and carbonates: the last 50 million years.
4 December	Joint AIG-GSA Christmas Cruise	
2010		
3 February	Kath Grey	Neoproterozoic stromatolite biostratigraphy: effective correlation with a controversial tool.
4 March	Margaret Ellis	The Western Australian Exploration Incentive Scheme (EIS).
7 April	Annual General Meeting	
	Nick Timms	Controls on gold mineralization in the Murchison Province: Implication for the evolution of the Yilgarn craton from mapping macro- to microstructure, geochemistry and geochronology.

Table 3 – DIVISIONAL AWARDS 2009

Award	2009 Recipient	Basis for the award
Gibb Maitland Medal	Timothy Griffin	Substantial contributions to geoscience in Western Australia, with particular consideration given to contributions that relate to the occurrence or discovery of mineral resources
Talbot Prize	Aaron Benincasa	Best Honours thesis at The University of Western Australia with a significant fieldwork component
GSA Medal	Simon Wai	Best undergraduate results in the final year of the BSc (Applied Geology) degree at Curtin University of Technology
WACE Prize	Mary Hewitt	Best aggregate score in the Earth and Environmental Science WA Certificate of Education

GEOLOGICAL SOCIETY OF AUSTRALIA (WA DIVISION) TREASURER'S ANNUAL REPORT FOR 2009

A preliminary Balance Sheet and Profit and Loss Statement for the 2009 calendar year are attached. Our 2009 financial records are currently in the auditing process, but unfortunately final audited statements were not received in time for the AGM. I wish to thank Jocelyn Thomson for her accounting skills throughout the year and for providing the attached preliminary statements.

I will highlight the following points from the statements:

- As of 31 December 2008 the WA Division had total equity of \$81,711, this amount being divided between investments with JB Were and our working cheque account.
- Interest paid to our investments and working account totaled \$2,858. Note that with falling interest rates, this figure is less than that for 2008.
- Membership dues (capitation) received from Head Office amounted to \$8,359, an increase of about \$800 over 2008..
- The printing and postage cost of the West Australian Geologist (WAG) totaled \$6,972, largely offset by income from advertising totaling \$4,725.
- Accounting fees (\$1,610) include casual hire of an accountant and the annual audit.
- A number of events were subsidized to members including the Annual Dinner, Annual Christmas Cruise jointly held with AIG, and monthly meetings. Such subsidies totaled \$6,237. This anomalously large figure reflects the large number who attended the Annual Dinner, which is substantially subsidized.
- During 2009 the Division made significant donations to university student associations, donated prizes to the winners of the TEE Prize, GSA Medal, and Talbot Medal, and to the ASMV (Australian Student Mineral Venture). Such donations totaled \$6,215.
- The net financial result for the WA Division at the end of 2009 was a loss rounded to \$6,775.

At the end of 2009 the Division's overall budget remains healthy, and it is always important to remember that making a surplus is not the main function of the Society. Some positive financial changes are expected as a consequence of the move of WAG to an online only publication, and there will be some changes to the pricing structure of the annual dinner, though these will not affect the traditional subsidization of GSA members. We are looking forward to another successful, and hopefully more profitable, year during 2010.

Katy Evans

Treasurer

Geological Society of Australia – Western Australia Division

Geological Society Australia WA Division

PO Box 6014
East Perth 6892
West Australia

Profit & Loss Statement

1/01/2009 through 31/12/2009

3/02/2010
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Income		
Capitation		\$8,359.18
Subscriptions received		\$114.21
Glover Book		\$118.18
INTEREST		
Interest Com Bank	\$37.69	
J B Were Invest Notes Interest	\$2,379.71	
J B Were Cash Trust Interest	\$440.63	
WAG		\$4,725.00
FUNCTIONS		
Annual Dinner	\$18,073.73	
Total Income		<u>\$34,248.33</u>
Cost of Sales		
Gross Profit		<u>\$34,248.33</u>
Expenses		
Accounting Fees	\$1,610.00	
Bank Charges	\$85.00	
Committee Meetings	\$441.27	
General Meetings	\$175.00	
Reimburse Subs	\$123.30	
FUNCTIONS		
Annual Dinner	\$22,447.74	
Xmas Cruise	\$521.00	
Miscellaneous Functions	\$1,341.27	
Conferences	\$150.00	
DONATIONS/SPONSORSHIP		
Student Prize	\$914.54	
ASMV	\$5,000.00	
Donations Student Bodies	\$300.00	
Miscellaneous	\$26.14	
Postage	\$181.82	
Stationery and Printing	\$733.53	
WAG	\$6,972.24	
Total Expenses		<u>\$41,022.85</u>
Operating Profit		<u>-\$6,774.52</u>
Other Income		
Other Expenses		
Net Profit / (Loss)		<u>-\$6,774.52</u>

WEST AUSTRALIAN GEOLOGIST (WAG) BUSINESS REPORT 2009

The West Australian Geologist (WAG) is the bi-monthly newsletter of the Western Australian Division of the Geological Society of Australia.

PUBLISHING AND CONTENT

During 2009 the six issues of WAG have run between 12 and 20 pages, and have continued to provide what we hope is a good balance between information on upcoming meetings, articles and advertising. Acquiring good and relevant articles remains one of the more difficult parts of the Editor's job, and I urge all members to keep an eye open for possible contributors/contributions. Our printer during 2009, Fineline Print, produced a good quality black and white newsletter, delivered timely in a plastic sleeve. A full colour digital version of the WAG was provided in PDF format for download at our divisional web site (<http://wa.gsa.org.au/>). With increasing costs, and difficulty attracting sufficient advertisers, the decision was taken during 2009 to distribute WAG online-only from the start of 2010.

ADVERTISING

The printing and postage cost of the WAG during 2009 was offset with advertising and sponsorship. Companies and organizations that sponsored issues of the WAG during 2009 include Snowden, Triton Gold, Rocklabs, Geo Conferences and the Geological Survey of Western Australia; most sponsors also advertised with us throughout the year. Other companies that advertised with us in 2009 include Data Directions, Cross Country Charters, Maxwell and KlipStone. A number of our former clients have returned to advertise with WAG in 2010.

FINANCIAL SUMMARY

The figures below are based on income and expenditure for the year to 31 Dec 2009.

- WAG printing and postage costs 2009: \$6,972.24
- WAG income from advertising and sponsorship 2009: \$4,725
- WAG net loss 2009: -\$2,247.24

In summary, the WAG has made a loss in 2009. This is in part a result of a down turn in the number of advertisers, presumably linked to the general industry downturn, but it is also partly due to the fact that several once-off advertisers towards the end of the year were not invoiced before 31 December, and such income will be counted in 2010. While it must be remembered that the main function of the WAG is to serve the members, rather than being a profit making enterprise, a loss two years in a row has featured in the committee's decision for WAG to be distributed online-only from 2010.

Finally, I'd like to thank again all of our 2009 sponsors and advertisers for their support, our 2009 printer, Fineline for efficient service, Janet Muhling and Stephen White for a very professional editing job, and all members who have provided content for the WAG during 2009.

Peter Haines
WAG Business Manager 2009
Geological Society of Australia – Western Australia Division

AWARDS SUB-COMMITTEE ANNUAL REPORT 2009-2010

GIBB MAITLAND MEDAL, 2010

Two new nominations were received for the 2010 Gibb Maitland medal, with one carried over (unrevised) from last year. The Sub-Committee was pleased with the quality of the new nominations. A unanimous decision to award the medal was reached after considerable discussion. No referees reports were needed given the strength of the nominations and the Sub-Committee's professional knowledge of the nominees.

The Sub-Committee recommended that the 2010 Gibb Maitland Medal be awarded to Dr. Timothy John Griffin, Executive Director, Geological Survey of Western Australia (nominators Dr Mike Donaldson and Mr Jeffrey Gresham).

Dr Tim Griffin is awarded the Gibb Maitland medal for his substantial and sustained contribution to geoscience in Western Australia through both his personal research contribution and his leadership during his 30 year career in the Geological Survey, which has culminated in his present position of Executive Director. Tim's pioneering mapping in the Kambalda- Widgiemooltha area of the Eastern Goldfields province in the 1980s provided the basic framework for tectono-stratigraphic models for greenstone belt development that are still used today. Working with Cees Swager, he was instrumental in advancing the understanding of the structural development of the Eastern Goldfields with the recognition of early thrust tectonics. His work laid the groundwork for subsequent understanding the regional setting of mineralization and provided a basis for gold and nickel exploration of the past two decades. Tim also made a major contribution to knowledge of the geology of the Kimberley, with the initiation and implementation of the collaborative NGMA program. Together with Ian Tyler, Steve Sheppard and Alan Thorne, he established the foundation of a plate and accretion model for the structural development of the Proterozoic in Australia. Importantly, Tim pioneered and set the highest standards for 1:100,000-scale geological mapping of Western Australia, firstly in the Eastern Goldfields and later the Kimberley, despite considerable initial opposition. In his managerial roles as Assistant Director and Director of GSWA, he has ensured that this mapping has continued with the same high quality, and has overseen major changes in the manner in which maps, publications and data are managed and delivered. As Director, Tim has been a strong advocate for the minerals and petroleum industries to Government, including access to ground, provision of pre-competitive data and assistance through the Exploration Incentive scheme. Tim has also strongly supported education and research initiatives through, for example, his Chairmanship of Geoconferences and as a Board Member of the de Laeter Centre.

Charles Butt (Convenor), Bryan Smith and Nick Archibald
March 2010

AUSTRALIAN STRATIGRAPHY COMMISSION, WA ANNUAL REPORT FOR 2009

Roger Hocking

WA Commissioner, Geological Society of Australia Western Australia Division

The WA subcommission of the Australian Stratigraphy Commission currently stands at two people (Roger Hocking and Kath Grey), and cannot complain of being overworked. Most of our queries during the year came from Canberra, and were related to correcting errors and updating the Australian Stratigraphic Names database hosted by GA. Western Australia could be said to have had a small win, in that the WA name for one rock unit crossing the border into SA, the Table Hill Volcanics, was retained at the expense of the SA variant, the Kulyong Volcanics. Decisions on which names to retain for units crossing borders will continue, at a gentlemanly pace. If you do use the database and spot an apparent error, the database custodians, Cathy Brown and Ollie Raymond at GA, are only too happy to investigate.

There is increasing pressure from Canberra for any new names to be properly defined, with details of characteristic lithology, age, distribution, and stratigraphic relationships, rather than just a bald mention without further explanation or justification. This is best done in publication, but even giving the details by email or the online form will assist in fleshing out the Stratigraphic Names database and weeding out inconsistencies. Remember, the more you put into the database, the more you can get out of it when you need some obscure details.

Business otherwise was advising on stratigraphic questions as they occasionally arose, suggesting some changes to proposed names where ambiguity was possible, and pointing people at the Stratigraphic Units area and database on the GA website as necessary. There is a lot more there than just a database – guidelines for lithostratigraphy, a back end to the database that provides an instant literature search for a unit, and so on.

Geological Society of Australia Inc – WA Division

Geological Heritage Convenor **Annual Report for 2009,**

2009 Geological Heritage Highlights

1. Two new areas from Western Australia have been added to the National Heritage List, Porongurup National Park, on 4 August 2009, and The Ningaloo Coast on 6 January 2010.

Porongurup National Park was listed as being one of the richest varieties of plants in Australia, with more than 700 native species within the park's 2,621 hectares, its diverse wildlife, tall karri and open jarrah forests, and massive granite domes.

The Ningaloo Coast was listed for its dramatic land and seascapes across time, latitude and species, providing a history of the movement of continents, changing climates, and the evolution of life over 150 million years.

2. The Geological Society of Australia made a submission, to the Natural Resource Management Ministerial Council on its Review of the *National Biodiversity Conservation Strategy*, outlining the importance of Earth Scientists in a multidisciplinary approach to managing environmental systems

In summary, the Geological Society of Australia submitted that the Strategy needs to acknowledge that:

1. in an Ecosystem approach to managing environmental systems, a holistic approach is required using “all relevant ...scientific disciplines”, i.e., an approach that investigates both the biotic and abiotic (such as geology, hydrologic and geomorphic processes) factors that underpin biodiversity must be understood for the strategy to be successful,
2. there needs to be suitably qualified personnel, trained in Earth Science Systems, as land managers, i.e., education and training is required.

Using the Ecosystem Approach, recognition of geodiversity in any region is important in that geodiversity, in its variety of landscapes, lithology, sediments, soils, and hydrological and hydrogeological settings, underpins biodiversity. Linking geodiversity and biodiversity stresses the relationship of biodiversity to Earth systems, and emphasises the importance of geodiversity to understanding biodiversity.

Margaret Brocx
March 2009