



The Queensland Geologist

Bi-monthly Newsletter of the Geological Society of Australia Inc. Queensland Division
Volume 107 No. 1 – February/March 2007

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IMPORTANT DATES:

Wednesday 21 February: GSAQ Meeting:

Topic: Extinction and recovery patterns of vegetation: the Cretaceous-Paleogene and end-Permian mass-extinctions compared

Speaker: Dr Stephen McLoughlin, School of Natural Resource Sciences, Queensland University of Technology

Where: Room 221, Steele Building, UQ

Time: 5:15 for 6pm; finger food

Cost: \$6 Members, \$8 Non-member, Students, \$2. Finger food & drinks

Studies over the past two decades have provided strong support for a causal link between the impact of a celestial body (in Mexico) and the global mass-extinction at the Cretaceous-Paleogene boundary. The results of high-resolution palynological studies of the boundary sequences across several continents are consistent with this argument; the effects on the vegetation declined with distance from the impact site. Southern Hemisphere Cretaceous-Paleogene successions, to date studied at high resolution only in New Zealand, reveal a diverse palynoflora abruptly replaced by fungi-dominated assemblages that are in turn succeeded by a steady recovery in fern spores, gymnosperm pollen, then angiosperm pollen. This palynofloral signature is interpreted to represent geologically instantaneous (days to months) destruction of diverse forest communities associated with the Chicxulub impact event. The pattern of floristic change suggests wholesale collapse of vascular plant communities and short-term proliferation of decomposer organisms followed by relatively rapid successional recovery of fern and seed-plant communities. These palynofloral signatures show several features in common with the Permian-Triassic transition but there are also important differences. The Permian-Triassic transition records global devastation of gymnosperm-dominated forests over a short interval commonly synchronous with peaks in fungal/algal abundance. This zone is typically succeeded by lycophyte- and/or acritarch-rich assemblages, eventually giving way to diverse gymnosperm-dominated floras. The major difference between the post-extinction fossil records is the much longer duration for each phase of the Triassic recovery vegetation compared to that of the Paleocene. Furthermore, the earliest Triassic shows unique sedimentological features such as a dearth of coals and a shift to red-bed sedimentation across all latitudes. The protracted extinction-recovery succession in the Early Triassic is incompatible with an instantaneous causal mechanism such as an impact of a celestial body but may be more consistent with hypotheses invoking extended environmental perturbations through flood-basalt volcanism and release of methane from continental shelf sediments.

9-13 July 2007: GSA Specialist Group in Tectonics and Structural Geology (SGTSG) Conference 2007: 'Deformation in the Desert'

Where: Crowne Plaza ,Alice Springs, NT

Fee Structure

- Early Bird Member (before 20 April 2007) \$ 525
- Early Bird Non Member (before 20 April 2007) \$ 650
- Early Bird Student Member (before 20 April 2007) \$ 275
- Early Bird Student Non Member (before 20 April 2007) \$ 525
- Full Fee member \$ 650
- Full Fee Non Member \$ 750
- Full Fee Student Member \$ 400
- Full Fee Student Non Member \$ 650

As you can see, being a GSA and SGTSG member saves you money. If you aren't a financial member – join – photocopies of application forms will be accepted as proof of a pending membership.

To register online or to obtain more details go to: www.sgtsg.gsa.org.au/events
email: Alan.Collins@adelaide.edu.au

13-15 December 2006: Joint 9th Australasian Environmental Isotope Conference and 2nd Australasian Hydrogeology Research Conference

Where: Stamford Grand Hotel, Glenelg Beach, Adelaide South Australia

Website: <http://groundwater.com.au/07-A3-Brochure-135399.pdf>

29 July-6 August 2007: International Union for Quaternary Research

Where: Cairns, Australia

Website: <http://www.inqua2007.net.au/>

22-25 September 2008: Australian Earth Sciences Convention (including the 19th AGC)

Where: Perth

This conference will be a joint event with the Australian Institute of Geoscientists (AIG). The organising committee is seeking input from members and specialist groups who would like to run a session or present a hot topic. The conference will occur during the International Year of Planet Earth. If you want to know more please email AESC2008@gsa.org.au

**THE INTERNATIONALLY RENOWNED
INFORMAL WEEKLY GET-TOGETHER FOR EXPLORERS AND MINERS
UNION JACK'S ALE HOUSE –**

English, Irish, Scottish & Welsh Pub - 127 Charlotte St, Brisbane CBD 5.30pm
on every Wednesday evening if your work/spouse/budget/health allows

GSAQ Field Excursion, Queens Birthday weekend (expression of interest)

As mentioned in the last newsletter, the Division is planning to resurrect our annual long-weekend field conference in 2007 and tentative planning is underway for a trip in south-east Queensland, probably in the Cracow and Mount Rawdon areas to examine new mining developments there and perhaps some of the older areas such as Eidsvold. **To help the committee judge the viability of such an event, could you please register your interest by contacting the Hon. Secretary.** Note that an expression of interest is not binding.

Applications for Fellowship of the GSA

As mentioned in previous newsletters, the Council is strongly encouraging GSA members to apply to become a "Fellow of the GSA". In the current Standards, the criteria for recognition as a Fellow are:

Any person who is a voting member of the Society, who,

(a) being an earth scientist with a minimum of ten (10) years employment in the earth sciences, and

(b) having served in an executive function (e.g. Council, Executive, Divisional Committee, Specialist Group committee, or as a Standing Committee member) on behalf of the Society for a minimum of two years.

Head Office is developing a web page to acknowledge the GSA fellows. The initial idea was focused on developing a list of Fellows to be published on the GSA website, but the plans have been modified the plans to include a biography as well as names.

All applications for Queensland members (including a short biography as justification for your application and to be included on the web site if successful) are to be sent to the Queensland Division Honorary Secretary Paul Blake for so they can be processed by the Divisional Committee and forwarded onto the Executive Committee. The postal or email address can be found at the end of the newsletter.

New Members

No new applications for membership have been received.

Membership renewals

A snapshot of the member renewals is as follows:

Mid-October: 2123 membership renewals mailed from head office (339 for Qld Division)

29th January: 1630 renewals received (259 for Qld Division)

If you don't receive your next copy of TAG or AJES, perhaps you forgot to renew and you have become un-financial. (Note: the Queensland Division will continue to send the electronic version of the newsletter for another 12 months).

The **login members** area on the GSA website will now take you to a secure site linked to the GSA database where you can browse your membership details, make a payment online or view the Member Register electronically. Some of you may think you already had this facility, the reality was a secure payment area, but the processing didn't occur in real-time – now it does, which eliminates the double entry data input; both updating the database and re-keying credit card details.

Queensland Committee 2006-2007

| <i>Position</i> | <i>Phone</i> | <i>Fax</i> | <i>E-mail</i> |
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| Chairman | | | |
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| Secretary and Webmaster | | | |
| Dr Paul Blake | 3362 9332 | 3362 9343 | paul.blake@nrm.qld.gov.au |
| Treasurer, Membership Secretary & Video Library | | | |
| Mr Friedrich von Gnielinski | 3362 9362 | 3362 9343 | vongnielinski@optusnet.com.au |
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| Awards Convenor | | | |
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| GSA Publications | | | |
| Mr Warwick Willmott | 3379 6485 | | willmott@powerup.com.au |

General correspondence should be addressed to our secretary:

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For subscription and address changes please contact the GSA's main office:

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Advertising and Sponsorship Rates:

Our newsletter is circulated to about 500 members across Queensland, as well as being posted on our web page. It represents an ideal opportunity to advertise your company and services.

| Size | width x height | 1 issue | 12 months (5 issues) |
|-----------------------------------|---------------------------------|---------|----------------------|
| Full page | 17.2 x 24.1 cm | \$120 | \$300 |
| Half page | 17.2 x 11.9 cm or 8.4 x 24.1 cm | \$75 | \$375 |
| Quarter Page | 17.2 x 5.8 cm or 8.4 x 11.9 cm | \$40 | \$200 |
| Business card | 8.4 x 5.8 cm | \$20 | \$100 |
| Pamphlets and Flyers (as inserts) | | ~ \$100 | |