



# Mineralogical Society of Western Australia Inc. September 2013 Newsletter

## Editorial

There were two door prizes in July. Thanks to a private donation of a magnificent coffee-table book titled "The Magic of Minerals" that was won by Sue Koepke and to Stewart Cole for his donation of a calcite specimen from Broken Hill, won by Margot Willing.

There are a number of door prizes to be given away at the conclusion of the upcoming AGM, including some new mineralogy books, and two nice, hinged specimen boxes.

The policy that members may submit short adverts free of charge will remain. Additionally, it was agreed that other commercial advertisements would be accepted for a nominal charge.

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## Recent Activities

### **General Meeting held on Wednesday 17<sup>th</sup> July, 2013.**

The General Meeting was followed by a talk by Dr. Lena Hancock of the Western Australian Geological Survey entitled "**The HyLogger; spectral mineral identification in drill core and hand specimens**".

Australian State and Territory Geological Surveys have, for the past four years, been using CSIRO-developed, semi-automated HyLogging spectral profiling systems for rapid, semi-quantitative measurement of mineralogy in drill core and rock chips. These instruments are now capable of detecting common rock-forming minerals (feldspars, quartz, pyroxenes, garnets, olivines, carbonates, phosphate), in addition to a number of OH-bearing minerals (kaolins, smectites, micas, chlorites).

There are seven HyLogger<sup>TM</sup> machines which have been distributed to each of the Australian Geological Surveys. Funding was by the Federal Government through the AuScope programme. The system allows

for a rapid (1m in 30 sec) spectral analysis and imaging system for scanning of drill core and chips. It produces mineral spectra in the visible (380-1000nm), shortwave-infrared (1000-2500nm) and thermal infrared (6000-14000nm) parts of the electromagnetic spectrum.

**Minerals, identified by comparing spectra to TSG spectral library, include the following.**

<b>VNIR spectrometer</b>	<b>SWIR spectrometer (59 minerals)</b>	<b>TIR spectrometer (164 minerals)</b>
Iron oxide	Kaolin	Quartz, opal
Sulphate	White mica	Pyroxene
	Dark Mica	Olivine
	Tourmaline	Plagioclase
	Chlorite	Potassic feldspar
	Smectite	Garnet
	Epidote	Sulphate
	Amphibole	Amphibole
	Carbonate	Carbonate
	Pyrophyllite, gibbsite, diaspore	Many OH-bearing silicates
	Sulphate	Posphates
	Serpentine, talc	Zeolites
	Prehnite, topaz	Oxides

Current and future projects include:

- **EIS drilling projects**, including Speewah Fe-V-Ti
- **Nanjilgardy Fault**, including Paulsens and Mount Olympus Au mines
- **Glenburg** Au deposit
- **Murchison** VMS mineralization
- **Eucla Basin** GSWA drilling
- **Southern Cross** Au deposits
- **Hydrocarbon** detection
- **Browns Range** and **Mount Weld** REE mineralization
- **Zircon** study

We were given examples of the application of the HyLogger™ system to the Minnie Springs Mo prospect in the Gascoyne Province and to the Cummins Range REE carbonatite in the Halls Creek Orogen.

In conclusion Lena invited Minsoc members to visit Core Library and see the HyLogger™ system operating. This was organized and an excellent day was had by all those who attended.



An attentive audience listening to Dr. Lena Hancock discuss the HyLogger™ system.  
*Photo by S. Koepke.*



Dr. Lena Hancock describes the operation of the HyLogger™ system. *Photo by S. Koepke.*

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## Future Meetings and Other Activities

### **Annual General Meeting on 18<sup>th</sup> September 2013.**

The 13<sup>th</sup> Annual General Meeting of the Mineralogical Society of western Australia Incorporated will be held on **Wednesday 18<sup>th</sup> September 2013** at the WA Lapidary Club rooms located at 31, Gladstone Road, Rivervale (corner of Newey St) commencing at 7.30 pm.

The Annual General Meeting will be followed by a talk by Francine Payette entitled “**Fascinating Tourmaline**”.

Tourmaline is a *complex* group of minerals, complex both in its chemical composition and in its structure. This explains the fascinating growth features observed as well as some interesting properties that the mineral possesses.

We will have a closer look at some of these including colour zoning and distribution, polarity, dichroism, colour change effect, etc.

A selection of rough and faceted specimens will be available for illustration and, of course, hands on.

Francine holds a Masters degree in Geology from the University of Montreal (1976) and obtained her Diploma in Gemmology in 1985. She has lectured in geology at the University of British-Columbia and Université du Québec in Montréal; and in gemmology in Canada, Madagascar and Australia. A passionate *globe-trotteur*, she has visited gem/minerals localities worldwide. Her interest for the tourmaline group developed following her visits to Madagascar.

### **General Meeting on November 20<sup>th</sup> 2013.**

Speaker Kevin Morgan on “Early Exploration and Mineral Collecting”.

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## New Members

We welcome Kim Macdonald as a new member to the Society.

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## Field Trips

### **Western Australia Lapidary and Rockhunting Club Inc.**

By arrangement, members of the Mineralogical Society are able to go on field trips organized by the Western Australia Lapidary and Rockhunting Club Inc. If you are interested in attending these field trips please put your name on the notice board at the Lapidary and Rockhunting Club for the relevant field trip.

Please register with MinSocwa Field Trip organizers prior to attending any of the field trips to confirm event details.

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### Committee Members

Committee Members	
Stewart Cole - President ph 0414 904 169	Tom Bateman – Social Officer/Field Trips Leader
Sue Koepke - Secretary ph 0417 990 688	Mobile: 0417 908 188
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Geert Buters - Vice President	
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