

# Mineralogical Society of Western Australia (inc.)

February 2003

Volume 4, Issue 1

Forward Diary  
2002 -2003

## Presidents Report.

I trust that the festive season has been a pleasurable and safe one it is a special time of family and personal reflection especially in such troubled times.

The next lecture in our series on mineralogical topics will be by Mark on mineral associations and not as previously announced. A number of new field localities have been found on our behalf and will announce shortly as well as a series of guest speakers.

The December meeting lived up to its promises and I am sure the members in attendance enjoyed the evening as much as I did our thanks to both Mark and John.

On behalf of the committee I look forward to seeing our members and friends at the February meeting.

### Upcoming Field Trips

Mark has been busy as usual and we can look forward to several day trips to some sites close by, this includes an old lead mine. Also a weekend trip to the Murchison area where some choice Pyromorphites have been recovered recently. More details to come at the meeting.



The Mining Hall of Fame is to be the venue for the 2005 JSAMS. Try visiting the link below and view the online virtual galleries and more.

<http://www.apmhof.com.au/>

**February 5<sup>th</sup>**

**Mark Jacobsen -**

**Guest Speaker**

**April 2<sup>nd</sup>**  
**Club Meeting**

**June 4<sup>th</sup>**  
**Club Meeting**

**August 6<sup>th</sup>**  
**Club Meeting**

**October 1<sup>st</sup>**  
**Club Meeting**

**December 4<sup>th</sup>**

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# **39th Gemboree**

**April 18th - 21st 2003**

**Gawler, South Australia**

*Incorporating*

**National Gem and Mineral Show**



The 39th National GEMBOREE will be held at Gawler South Australia over the Easter Period April 18th to April 21st.

The event will be staged at the Princess Park Sporting Complex, as it was in 1998, there will be over 300 on site caravan sites available, as well as a limited number of caravans for hire.

The Town of Gawler itself, can also provide off site accommodation.

At the complex there will be plenty of food available, and in the evenings entertainment will be provided.

In the main hall we have 40 Dealers already booked in, who will be showing and selling Minerals both in the rough and finished form, as well as machinery that may be needed to work the minerals. There will also be working demonstrations. An area has also been set aside for tailgating.

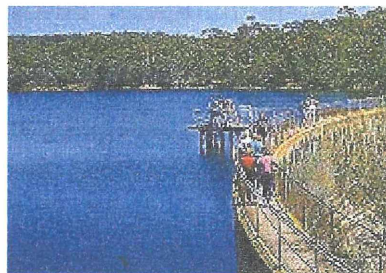
Mineral collections will be displayed, as well as mineral specimens both rough and finished that will be judged to the J&R set of rules which are used Australia wide.

"GEMBOREE 2003 GAWLER" Caps are available at \$6 each. and GEMBOREE 2003 GAWLER badges are \$5 each.

GEMBOREE 2003 Booklets are available from:



**GEMBOREE 2003  
P.O. Box 32  
SMITHFIELD 5114**



A stamped self addressed A5 envelope would be appreciated.

Contact can also be made to GEMBOREE 2003 by writing to the above address, by Phone/Fax 08 8284 1181, or by emailing:

[alancl@optusnet.com.au](mailto:alancl@optusnet.com.au) or [alanclemas@hotmail.com](mailto:alanclemas@hotmail.com)

## **ANOTHER TREASURED SPECIMEN – QUARTZ VAR. AMETHYST**

My good mate John Reeve and I are avid micromounters and I read John's article on Crocoite in the October 2001 newsletter with interest. John paid tribute to his mineral mentor - Jack McNamara, the man with the gemstone and mineral paved driveway.

John started his interest in minerals while still at primary school, whereas I started later, being in my mid 20's. Nearly 40 years ago, my wife came home from a girl's night out, wearing a tiger-eye pendant she'd bought at the lapidary party she'd attended.

That a "stone" could be made into something so pretty intrigued me, also what on earth was "lapidary"? Over the following weeks I read every book on this subject in our local library, and also discovered the Australian Lapidary Journal magazine in a nearby newsagency.

I joined the Victorian Lapidary Club and on our first field trip, met the late Jack Nelson, who will always be remembered for befriending us and showing us the way, as we progressed from interested onlookers, to active field collectors. We broke open some decomposed granitic boulders to expose small {4-6mm} Quartz crystals of good Amethyst colour. We'd found our first micromount specimens, although it would be several years before they were mounted and boxed. Viewing those Quartz crystals today is a constant reminder of Jack Nelson – my mineral mentor.

Although we lived on opposite sides of the country, John Reeve and I are fortunate that we both enjoyed the patronage of an older mentor, who took the time to encourage and assist us in our mineralogical development. I look around at our Minsoc meetings and see the same faces, each time a little older. If our Society is to flourish, where are our future members to come from? Can we do more to encourage others to develop an interest in our hobby?

Members reading this article are urged to consider the prospect of being a mentor. Can we act as mentor to a younger person – perhaps a son or daughter, grandchild, nephew or niece, or the child of a friend? If not, perhaps a workmate, or other contacts through social or sporting activities. Make a gift of some of those surplus specimens – who knows where a little encouragement will lead. Can we give a “show and tell” talk, with samples, to local schools, scouts or guides, cubs or brownies? Children or teenagers – anywhere.

**The future of our Society is in our hands.**

**Ted Fowler.**

**PS**

*The theme of this article is similar to a thought provoking “Guest Editorial” in the Mineralogical Record magazine Vol. 27 No. 1 –Jan/Feb 1996 issue {page 2}. Recommended reading. Ed.*

## **Giles' Elbaite pegmatite (Moriarty's Claim), Spargoville**

Giles' Elbaite pegmatite near Spargoville has aroused zealous prospectors to re-locate this pegmatite. In some mineralogy books, this pegmatite is erroneously implied to be the same as the Columbite pegmatite.

### Location

The original pit where Giles' spouse found gem green pocket tourmaline is located at 354,603 E and 6,537,587 N, UTM 51, AGD66, 410 metres elevation, GPS measured. This is close to the most eastern pit. The most western pit, where pink elbaite was uncovered is located at 354,428E and 6,537,593 N, UTM 51, AGD66, GPS measured.

This pegmatite was rediscovered by Tony, Terry, and Bill Moriarty and pegged circa 1966 as PA 7932. This license is located 201 meters east of the former MC 39. PA 7932 was 401 metres long east-west and 241 metres north-south. The pegmatite is 6 kilometres or 3.73 miles south of Spargoville and also 2 kilometres west of the bitumen road. Spargoville is 45 kilometres southeast of Coolgardie, with Coolgardie located 557 kilometres east of Perth. The pegmatite can be located on the 1:100,000 scale Yilmia (3135) topographic map sheet.

### Directions

Beatie Smith graciously supplied the directions to the pegmatite. I am very appreciative of her help in locating this elusive locality. The directions start from the T intersection of the graded dirt Nepean Road with the bitumen Coolgardie-Norseman Road (0.0 kilometres at 353,046 E and 6,545,170 N, UTM 51, AGD66). From this intersection travel southward 6.9 kilometres to a dirt track on the right (west) with sheet metal fence posts (356,155 E and 6,539,356 N, UTM 51, AGD66) near the bitumen road. Travel west on the dirt track for 1.9 kilometres to an intersection with a north-south dirt track (354,355 E and 6,59,287 N, UTM 51, AGD66, GPS measured). Turn left (south) on this dirt track and travel for 1.72 kilometres to another T-intersection at 354,359 E and 6,537,617 N, UTM 51, AGD66. At the T-intersection, turn left (east) onto the dirt track and travel 50 metres to the most eastern pit at 354,428 E and 6,537,593 N, UTM 51, AGD66 (GPS measured). A string of prospects follow the pegmatite outcrop eastward past the original Giles' tourmaline pit.

## History

In 1938, A. S. (Syd) Giles or more properly his wife discovered elbaite (green tourmaline) in a pegmatite near Spargoville (Giles 1955). After a day of prospecting for beryl, Giles returned to his waiting partner at the car. She greeted him with her discovery of gem green tourmaline. Giles (1955, p. 81) reported that she held out "Two hands full and a small scarf containing nothing but beautiful gem-quality green tourmaline crystals [up to one inch in length by three-eighths of an inch in diameter, mostly with perfect terminations]..." These euhedral, lustrous crystals were found as loose float on the ground near the car, having eroded from a gem pocket (a vugh). Walter (1959, p. 25) noted that many of these crystals were terminated and extremely beautiful. The magazine editor, R. C. Sprigg, noted at the end of Giles' (1955) report that the 1938 discovery was made near the Coolgardie-Norseman road, near Spargoville. He also noted ambiguously that Giles had discovered a second pegmatite nearby(?) that contains pink elbaite. This is possibly the North Moriarty elbaite pegmatite.

Simpson (1948, V2, p. 199) described an elbaite occurrence from Spargoville without any detail as to location, discoverer or date of discovery. He wrote "the centres are colourless or very pale green, flecked with rose pink patches. Towards the outside the mineral becomes rapidly darker green until the surface layer is a deep bottle green..." These were said to come from two different pegmatite veins 2 to 3 miles south of Spargoville. It is assumed that this is the same locality discovered by Giles' wife in 1938.

In 1959, D. R. Walter, an associate editor and friend of Giles, relocated with significant difficulty the elbaite-bearing pegmatite and described it as being three feet wide and "could be traced on the surface for about 500 feet and appeared to consist chiefly of platy albite [cleavelandite] with fairly coarse lepidolite in places" (Walter 1960, p. 24). Pink, green and blue tourmaline, some reaching 2 inches by 5/8 inches was also reported from this pegmatite by Walter (1960).

Walter (1960, p. 24) further stated that "In one place a shallow hole had been sunk two years previously -- only to a depth of 3 feet and 20 square feet in area. The dump material from this was identical to the existing outcrop and a careful search revealed small bluish-grey tourmaline prisms about 0.25 inch to 0.50 inch long. Most were loose on the dump but a few specimens of albite were collected which were shot through with tourmaline crystals 1/8 inch thick."

Circa 1963, after reading of Walter's (1960) description of the gem pegmatite Tony Moriarty with the encouragement of his brothers Terry and Bill, started systematically walking grid lines to inspect the entire greenstone belt south of Spargoville. He was searching for a 20-meter long pit with gem green tourmaline fragments and lepidolite. After two unsuccessful weeks, the three brothers met and discussed the results. Tony remarked that he had seen no 20 metre long pit. Bill corrected that they were looking for a 20 square foot pit - meaning 4 by 5 feet in size. "Yes, there was a pit that big on a lepidolite-bearing pegmatite", Tony said.

The three brothers soon thereafter went and visited the pegmatite pit. Standing around the pit, Tony observed no coloured tourmaline and felt that this was not the right place. Terry bent down and picked up a choice green pocket chunk. "Nope, this is the right place, take a look at this." They had re-discovered Giles's old pit. Afterwards they pegged the pegmatite as PA 7932 and worked the pegmatite till presumably 1966. They excavated the most western pit where they recovered pink, green and watermelon elbaite.

After 1966, another prospector put in several costeans across the Giles' pegmatite and also located and excavated another lepidolite-elbaite pegmatite 150 metres north of the western pit. Members of the Western Australian Lapidary and Rock Hunters Club of Rivervale also became acquainted with the pegmatite during some of their trips. Their mud maps guided later collectors to the pegmatite.

## Geology

The pegmatite is within the Eastern Goldfields Terrane of the Archaean Yilgarn Craton. The greenstones of komatiite, shale and basalt form a folded north-south trend with the units dipping to the west where the pegmatite has been intruded.

Exposed on the surface is an almost east-west trending pegmatite that has been intruded discordantly into the Archaean aged greenstone units. The pegmatite is exposed on the surface for at least 200 metres along strike with a thickness of perhaps 1 to 2 metres, dipping very steeply. The outcrop along strike is mostly of fine-grained purple lepidolite and cleavelandite.

The asymmetric zoning is very similar to that seen in the California pegmatites. The wall zone on one side is aplite whereas the other side is of coarse-grained microcline-albite-quartz. An informally named zone, described by Jahns and Wright (1951) as "pocket pegmatite", in the central part of the pegmatite consists of cleavelandite, quartz, elbaite and fine grained lepidolite. This is the effective core, since the white quartz masses are too intermixed with lepidolite to be properly a quartz core.

Although none were seen in place, small vughs containing gem tourmaline were present in the pegmatite as indicated by the euhedral, gemmy crystal fragments of tourmaline and quartz observed in collections and field inspected.

## Mineralogy

Inspection of the pegmatite in year 2002 revealed albite (cleavelandite, sugary), beryl (white, pink), elbaite (green, blue, pink, watermelon), lepidolite (fine grained), microcline, muscovite, schorl and zinnwaldite (?).

Simpson (1948, V 2, p. 199) note the occurrence of green elbaite from two of the pegmatite veins south of Spargoville. Walter (1960) noted elbaite (green, blue and pink) and lepidolite. The Western Australian Museum specimens of elbaite were in a matrix of quartz and albite variety cleavelandite.

Simpson collection specimen no. 2645 (in the Western Australian Museum) consists of several dark green 0.5 to 0.25 centimetre, equant, gemmy to almost flawless crystal fragments.

Giles collected gemmy green crystals up to 1 inch by 3/8 inch (2.5 x 1 cm) diameter in 1938. By 1960, D. R. Walter was only able to find 1/4 by 1/2 inch (63 x 127 mm) long blue crystals. These crystals were elbaite that had crystallized in a pocket. A small fragment from this original find was recovered by John Reeve in December 2002. It consisted of a euhedral quartz crystal fragment (1 centimetre in length) with multiple parallel faces with a green-blue crystal fragment attached to a face.

A box of elbaite specimens (MDC no. 3885) was acquired by the Western Australian Department of Mines circa February 1966 from PA 7932, Bill Moriarty's license. The specimens consist of bright pink and pale green, glassy but fractured elbaite in quartz and cleavelandite. The two largest crystals in matrix were 3 by 0.5 centimetres and 4 by 0.75 centimetres in size. The individual crystals contain both green and pink colours. A one centimetre long, gem green terminated elbaite from this locality was inspected from Clive Daw's collection. This crystal clearly originated from a pegmatite pocket (vugh). Other fragments of coloured tourmaline recovered from the pegmatite in 2002 were green, blue, and pink. Light blue elbaite with white coloured cores were also found in matrix.

Fine grained and medium grained masses of bright purple lepidolite are exceeding common all along the pegmatite outcrop and in the pits.

**Is there such a thing as mineral humour? I am inclined to think that the answer to this is No. I am sure one of you would have sent me a joke or anecdote or two to put in this newsletter if the answer was Yes. I am waiting for someone to prove me wrong .**

**ED**

# MINERALOGICAL SOCIETY OF WESTERN AUSTRALIA (INC)

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**Membership Details:**

Joining Fee \$5.00  
Adult Member \$20.00  
Newsletter only \$15.00

An application form for membership can be obtained by writing to: -

The Secretary, J. Reeve

Mineralogical Society of Western Australia (Inc)

13 Buchan Place, Hillarys, W.A. 6025

Ordinary meetings of the Society are held on the 1st Wednesday in February, April, June, August, October and December in the W.A. Lapidary and Rock Hunting Club rooms 31 Gladstone Street Rivervale, commencing at 7.30pm. The January meeting will involve social activities at a time and place to be notified.

**Visitors are most welcome**

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Newsletter of the Mineralogical Society of Western Australia

13 Buchan Place, Hillarys, 6025  
Western Australia, Australia

**OUR SOCIETY'S MISSION**

To encourage mineralogical study by amateur and professional alike and, in so doing, discover, document and preserve the earth's and in particular Western Australia's natural history.

**OBJECTIVES**

Whilst focusing on the minerals of Western Australia, the overall objectives of the Society shall be:

- (a) To advance the science of mineralogy.
- (b) To disseminate knowledge of minerals, their occurrence and associations.
- (c) To establish and maintain a register of mineral species and their occurrences in Western Australia.
- (d) To increase knowledge of related fields of earth science.
- (e) To keep members abreast of developments in mineralogy.
- (f) To encourage an appreciation of the aesthetic value of minerals.
- (g) To promote the proper care and preservation of mineral specimens.
- (h) To promote the conservation of the geologically unique and of the environment in general.
- (i) To provide a means of contact between professionals and amateurs in the various fields of the earth sciences.
- (j) To foster a sense of cooperation and understanding between individuals, institutions and resource companies in the field of mineralogy.
- (k) To provide a forum for debate and discussion on matters relating to mineralogy.

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