

# Australia and New Zealand Micromineral News

Issue 3 – April 2012



Cover photo: Decrespignyite-(Y), Paratoo, South Australia. ~11mm high.  
Photo and specimen: Steve Sorrell.



Editor:  
Steve Sorrell  
steve@crocoite.com

## Introduction

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A belated Happy New Year to you all!

This issue of the Australia and New Zealand Micromineral News is a little late, mainly due to my move from Tasmania to Ballarat. Since the last issue, Tucson has come and gone, with the Arthur Roe Memorial Micromount Symposium, and the Victorian Gemkhana at Shepparton (notes on both elsewhere in this publication).

The Joint Australian Mineralogical Societies' Seminar is coming up in Perth, Western Australia, in June, with a Rare Earth Elements theme, and one day has been put aside for micromounters. The theme for the latter session is nickel minerals from Western Australia.

The Australian Gemboree is on over Easter at Bundaberg, Queensland, and John Haupt is hoping that there will be a micromounter gathering. Talking of John, I inadvertently missed putting in an article from him in the last issue. It is included in this one, along with an update on activities here in Victoria. Also in this second issue are short articles on wittichenite from Mt Gunsen, and how to make your own self-closing tweezers. Read on!

## Contributions – We Need Your Input!

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Articles should be submitted to the editor in Word format, and any photos should be of a sufficient quality for publication. If you believe that you can provide a suitable article for the next issue, please advise the editor as soon as possible. Planning for the next issue begins as soon as the current one is published!

## Contacts

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If you want to find out what's happening in your region with micromounting or microminerals, get in touch with one of the following:

- ✉ New South Wales: George Laking – bglaking@tech2u.com.au
- ✉ New Zealand: Jocelyn Thornton – sodalite@paradise.net.nz
- ✉ Queensland: Russell Kanowski – kanowfam@icr.com.au
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- ✉ Victoria: John Haupt – john.haupt@bigpond.com
- ✉ Western Australia: Susan Koepke – minsocwa@hotmail.com

## Forward Diary

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Please send details of upcoming events (up to six months ahead would be good) for inclusion in the next issue of the Australian and New Zealand Micromineral News.

## Perth, WA: June 8-11, 2012 – Joint Seminar Micromount session details

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You are here: [Home](#) ▶ [Joint Seminar 2012](#) ▶ Micromounter Symposium

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### Micromounter Symposium

Last Updated on Wednesday, 18 January 2012 12:00  
Published on Thursday, 03 November 2011 05:01  
Hits: 217

### Micromounter Symposium

A one day Micromounter Symposium will be held on Friday 8th June.

The theme of the Symposium is "Nickel Minerals of Western Australia"

The Symposium will be held at the:

Gemmological House  
132-136 Railway St,  
Claremont, WA, 6910

<http://minsocwa.org.au/index.php/2011-10-10-16-26-00/76-micromounter-symposium>

## New Zealand Northern Region Mineral Interest Group 2012 schedule

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- ☒ May 5<sup>th</sup> – Reference collection
- ☒ June 2<sup>nd</sup> – Western Australia minerals
- ☒ June 30<sup>th</sup> – Reference collection
- ☒ August 4<sup>th</sup> – Your choice (bring any material you want to work on)
- ☒ September 15<sup>th</sup> – Reference collection
- ☒ October 6<sup>th</sup> – Symposium preparation
- ☒ November 10<sup>th</sup> – Symposium field trips follow-up
- ☒ December 1<sup>st</sup> – Xmas lunch – your choice

## New Zealand Micro-Mineral Symposium

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- ☒ October 19<sup>th</sup> to 22<sup>nd</sup> – Stavelly

Contact Rod Martin ([pincha@ihug.co.nz](mailto:pincha@ihug.co.nz)) for either of the above.



## A Wittichenite Crystal from the Cattle Grid mine, Mount Gunson, South Australia

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by David M. Colchester<sup>1,2</sup> and Ross E. Pogson<sup>1</sup>

<sup>1</sup>Australian Museum, Sydney

<sup>2</sup>School of Natural Science, University of Western Sydney

### Introduction

A crystal on display in the *Planet Of Minerals* gallery at the Australian Museum labelled chalcocite was recently spotted by George Stacey as possibly being mislabelled. He suggested that it was likely to be something more interesting and rarer, and a quick check of possibilities suggested wittichenite. The mineral was subsequently taken off display for closer examination to establish its true identity.

Since this specimen displays a number of well developed faces it was decided to, also, take the opportunity to identify them and construct a crystallographic rendition using SHAPE software. The opportunity was also taken to compare its crystal morphology with two specimens labelled wittichenite whose photographs are posted on the internet. However, we stress that because of the obvious limitations in having only single a photograph of each specimen to work from, our crystallographic renditions of these two specimens may lack some detail. All three wittichenite specimens were collected from the Cattle Grid mineral deposit, one of several occurring near Mount Gunson, west of Lake Torrens in South Australia. Its geological occurrence and mineralogy has been summarised by Solomon and Groves (1994). The primary mineralogy consisted of veins of Fe, Cu, Zn and Pb sulphides, partly oxidized to chrysocolla, atacamite and malachite.

Although wittichenite has long been recognized its crystal morphology does not appear to have been studied in detail. Goldschmidt (1923) includes wittichenite in his classic atlas of mineral forms but he does not provide a crystal drawing of the mineral. Wittichenite has the composition  $\text{Cu}_3\text{BiS}_3$  and was named by Kenngott in 1853 after Wittichen in Germany (Kenngott, 1855). Criddle and Stanley (1979) give the following crystallographic data for wittichenite: orthorhombic, point group, 222 with  $a = 7.677\text{\AA}$ ,  $b = 10.349\text{\AA}$ , and  $c = 6.706\text{\AA}$ . These are the values used to make the crystallographic renditions.

### Wittichenite crystals from Cattle Grid orebody, Mount Gunson.

#### **Specimen 1** (figures 1 and 2)

The Australian Museum specimen (number D47210) measures 21mm by 14 mm by 8 mm and is composed of at least two crystals, both appearing to have the same orientation (figure 1). It is dark bronze in colour but the faces have an iridescent hue when viewed under specular reflection. Because the specimen appears to be made up of a single mineral species with only some very small blebs of matrix adhering to it we measured its specific gravity (SG). This was found to be 5.92. This value is a bit low compared to the published measured SG of 6.01 and a calculated SG of 6.19 (Anthony et al. 1990) but it is significantly higher than that of chalcocite (5.6) with which it was confused.

The larger of the two crystals has well developed prism and terminal faces and this crystal was examined with the purpose of identifying the crystal faces present. The interfacial angle between the large prism face and the face adjacent to it was found to be  $20.5^\circ (\pm 0.2^\circ)$ . This value is very close to  $20.35^\circ$ , the calculated value between the (210) and (100) faces. The two possible equivalent alternative angles are those between the (012) and (001) faces and between the (201) and (100) faces. These angles are, respectively,  $17.95^\circ$  and  $29.79^\circ$  and are sufficiently different to be ruled out. Both the (210) and (2 $\bar{1}$ 0) faces display striations parallel to the c axis and this feature has been used to define this direction.

These striations seem to be formed by the repeated alternate development of faces conforming to the  $\{100\}$  and  $\{010\}$  forms. The terminal faces are small and numerous with many displaying tiny pits on their surfaces. A crystallographic rendition of this crystal is shown in figure 2.



Figure 1: Wittichenite, Cattle Grid orebody, Mount Gunson. Photo by Stuart Humphreys, Australian Museum.

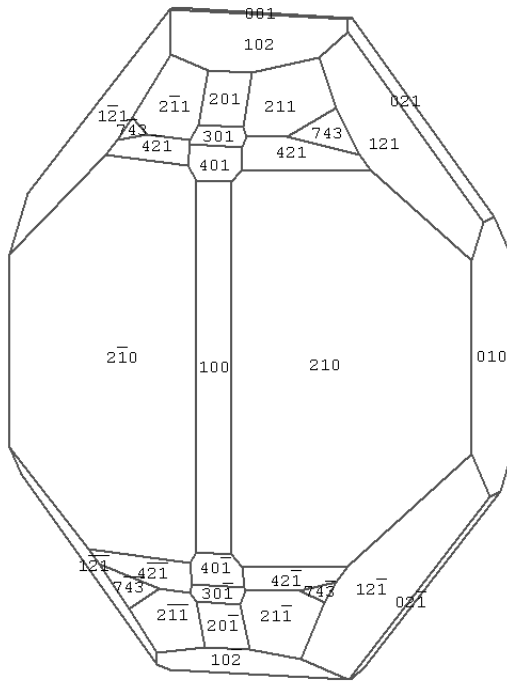


Figure 2: A Crystallographic drawing of the larger wittichenite crystal in specimen 1 (figure 1). The crystal is shown in standard orientation

### **Specimen 2** (Figure 3)

A photograph of this specimen can be viewed on the RRuff web site. The specimen is tabular with its shape dominated by the  $\{210\}$   $\{2\bar{1}0\}$  forms. The high angle terminating faces are controlled by the  $\{021\}$  and  $\{0\bar{2}1\}$  forms. As with the other two specimens the lower terminating faces are not present because the mineral has been attached to matrix.

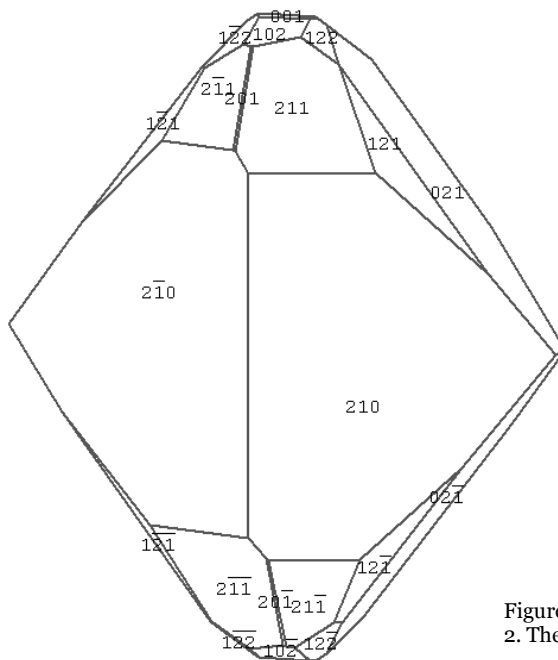


Figure 3: A crystallographic drawing of specimen 2. The crystal is shown in standard orientation

**Specimen 3** (Figure 4)

This wittichenite crystal is now in the Smithsonian collection. Again, only one half of the crystal appears to be present. It appears that one side of the crystal that is out of the field of view is also truncated. This is another tabular crystal dominated by the  $\{210\}$   $\{2\bar{1}0\}$ .

In summary the tabular habit of these three crystals from the Cattle Grid orebody is controlled by prism faces having the  $\{210\}$  and  $\{2\bar{1}0\}$  forms. These large faces are also striated parallel to the  $c$  axis.

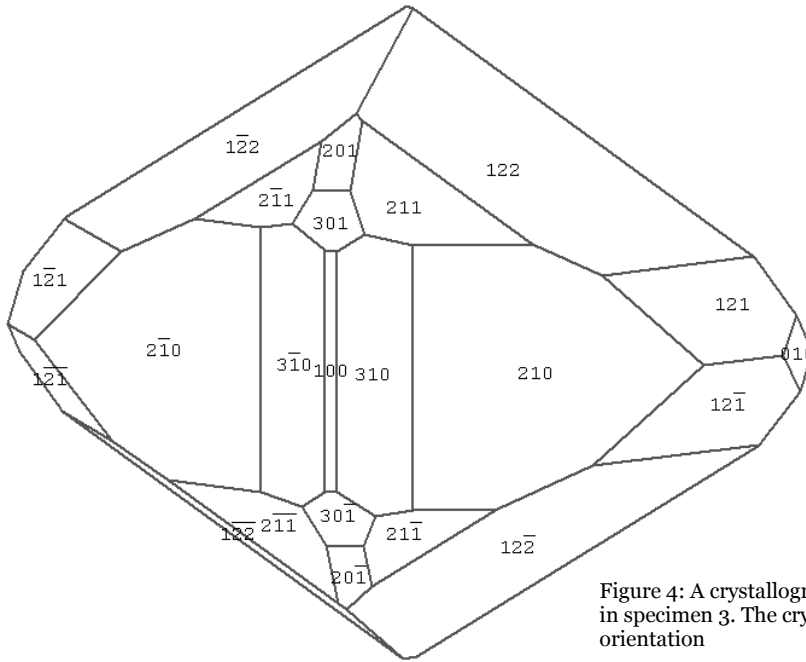


Figure 4: A crystallographic drawing of the crystal in specimen 3. The crystal is shown in standard orientation

**References**

Anthony, J. W., R.A. Bideaux, K.W. Bladh, and M.C. Nichols, 1990, *Manual of Mineralogy* vol. 1

Criddle, A.J., and C.J. Stanley, 1979, New data on wittichenite. *Mineral. Mag.* Vol. 43 p. 109-113

Goldschmidt, V. M., 1923, *Atlas der Krystallformen* vol. 9 p.82

Kenngott, G.A., 1855, *Ubersichte der Resultate mineralogischer Forschungen*, Leipzig, p.118

Solomon, M. and D.I. Groves 1994, *The Geology and Origin of Australia's Mineral Deposits.*

## The Mineralogical Society of Victoria Micro-Mineral Group

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by John Haupt

(Editor's note: The first part of this article was intended for the last issue (December, 2011) but was unfortunately overlooked. The Editor apologises to John.)

As mentioned in the first newsletter, we continue to meet each month in members' homes.

Several members of our micro group went on the Society's field trip to The Anakies in October 2011, where we collected in the Eastern Hill quarry. Our first stop was on an upper level on the south side of the quarry. Here we all collected dolomite, which has recently been identified from the quarry. The slightly translucent globules of dolomite were scattered on numerous pieces of scoria (Figure 1). We then moved to a lower area, warmer and less windy, to eat our lunches. Here on a large rock, about 2 metres high, aragonite and magnesite could be seen on a joint plane (Figure 2).

Anorthoclase crystal fragments up to 2 cm were picked up from the quarry floor. Others, some larger, were still embedded in scoria. Also found embedded in scoria were small quartz xenoliths, quite fractured, and sometimes showing signs of volcanic glass bubbles at their edges. Some magnesite, as opaque white nodules, was found lying on the quarry floor.

Just a few of the following were also collected: aegirine-augite, calcite, dolomite, hematite, opal variety hyalite, phlogopite, pseudobrookite, phillipsite and olivine. The minerals are mostly micros but look great under the microscope. Judy Rowe has placed images of many of the minerals from The Anakies on the Mindat website ([www.mindat.org](http://www.mindat.org)) under the location Mount Anakie.

The topic for our meeting in late November was USA minerals. Whilst only a small group met, the range of different minerals and localities was wide. The famous localities of Majuba Hill in Nevada and Gold Hill in Utah, noted for their range of arsenate minerals, each had a number of species represented – Majuba Hill: strashimirite, chalcophyllite, arthurite, pharmacosiderite and clinoclase; Gold Hill: mixite, conichalcite, tyrolite, connellite, jarosite, arseniosiderite, carminite, cerussite, scorodite and adamite (in several forms and colours).

An interesting locality was Obsidian Cliffs in Oregon, where osumilite, laihunite and phlogopite occur in vesicles in rhyolite. The locality is now in a wilderness area.

Some rarer species viewed were veszelyite from the Black Pine mine, Philipsburg, Montana; perovskite with andradite, variety melanite, from the Dallas Gem mine (Benitoite mine) in California and hendersonite from the Pandora mine in Utah. Also noted were a couple of rare earth minerals, joaquinite-(Ce) from Clear Creek, San Benito Co., California and parisite-(Ce) from the Snow Bird mine, Alberton, Montana.

Whilst on the subject of rare earth minerals, the Mineralogical Society of Western Australia is hosting the Joint Mineralogical Societies seminar in Perth in June 2012, with the topic Rare Earth Minerals. Advance information and registration can be obtained on their website [www.minsocwa.org.au](http://www.minsocwa.org.au). Also of possible interest is a report recently produced by Geosciences Australia on the rare earths entitled: 'The major rare-earth-element deposits of Australia: geological setting, exploration, and resources'. This is available on their website as a free download (27 Mb file) ([www.ga.gov.au](http://www.ga.gov.au)).

We also look forward to reading about the activities of the micro-mineral groups in the other States and ask a representative from each to submit a report for the next issues.





Figure 1: Searching for dolomite specimens in the Eastern Hill quarry at Anakie. Photo: J. Haupt.

Figure 2: Ian Hammond and John Haupt inspect the surface of a large rock covered with magnesite and aragonite. Photo: J. Rowe.





We have had 2 meetings so far this year. January's topic was minerals named after Australians and Australian localities. Lin Sutherland's catalogue in the December 2000 issue of the Australian Journal of Mineralogy was a great help, but not many of the 106 species were represented in the members' specimens as many are extremely rare. More recent Australian species which we viewed were decrespignyite and paratooite from the Paratoo copper mine, kapundaite, luinaite, pittongite and plimerite.

We always have a lively discussion on the topic and the minerals. This time it was the definition of an Australian. Many of the early people who had minerals named after them were born overseas (eg Edgeworth David, Charles Rasp, Robert Sticht), so were they really Australian? Before federation, each Australian State had their own naturalisation process for aliens (non-British subjects) and many of them became naturalised. As a result, the discussion became too hard so we just enjoyed looking at the species that members had brought along.

In February we decided to look at the rare earth minerals (minerals containing a Rare Earth Element (REE)), as this is the topic for the Joint Societies Seminar in Perth in June.

Not so many minerals in this group, but enough were brought along to look at and discuss. Most had either cerium, lanthanum and yttrium as the major REE in their composition and had a suffix – (Ce), (La) or (Y), known as the Levinson modifier after the person who proposed it to the International Mineralogical Association (IMA) in 1966.

Surprisingly, Australia is the type locality for 11 REE minerals and specimens of davidite-(La), decrespignyite-(Y) and paratooite-(Y) were viewed. Other Australian REE minerals included allanite-(Ce) from Mary Kathleen, fergusonite-(Y) from Mukinbudin, agardite-(Y), churchite-(Y) and bastnäsite-(Ce) from Broken Hill.

Also from Paratoo was bastnäsite-(La), donnayite-(Y), kamphaugite-(Y), tengerite-(Y), with Glyn Francis's recent booklet on Paratoo minerals helpful in identifying some of the specimens.

Overseas specimens included ewaldite and synchysite-(Ce) from the Dolyhir quarry, Wales and arisite-(Ce) (a new mineral) and shazhinite-(Ce) from the Aris Quarry in Namibia.

Some nice crystal specimens were from the classic localities of Zagi Mountain, Pakistan (bastnäsite-(Ce) and xenotime-(Y)) and the Trimouns quarry, France (allanite-(Ce) and bastnäsite-(Ce)).

Some references to REEs are:

- ☒ The May-June 2000 issue of The Mineralogical Record - a special issue on rare earths (Vol 35 No3).
- ☒ Geosciences Australia report by Hoatson, D.M., Jaireth, S. and Mieзитis, Y., 2011. The major rare-earth-element deposits of Australia: geological setting, exploration, and resources. (download available - see our previous micro group report).
- ☒ The Mineralogical Society of Victoria, Newsletter 203, Feb 2010 (available on the Australian Mineral Collector's website).

## Self-Closing Tweezers

by Ted Fowler

(Originally published in the International Micromounters Journal, 1999)

Why buy them, when you can make your own! I have several styles, all based on the common wooden clothes peg (clothes pin in North America). These pegs consist of two identical wood sides, held together and activated by a coiled wire spring.

The peg handles are lengthened by 5 cms for better leverage and handling control. Pegs are made from 1 cm wide whitewood so obtain some scrap wood 1 cm wide x 8 cm long and 5 mm thick, This is glued onto the last 3 cms of the peg handle, giving a 5 cm extension, The inside of these handles have a bevel sanded into them to match the existing bevel of the original handle. A similar bevel should also be applied to the outside top of the extension to form a more streamlined handle shape.

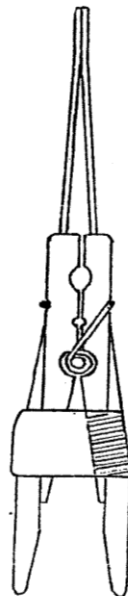
As the spring “joint” (which holds both halves of the peg together) is an open joint, that is, the two sides are free to move laterally, it improves handling to provide two “rails” so the peg handles can only move in the one plane.



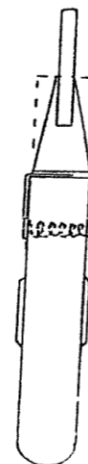
Wood clothes peg with spring action.



Side view: rubber tips model



Bike spoke jaws. Rails “epoxied” to one side only



Shaped nose: 3mm rubber tips fitted

This is achieved by two small sections of scrap anodised aluminium or brass strip being epoxied to both edges of one side of the peg (see diagram above). After setting, the free side of the peg can only move in the one arc and the tips will always come together perfectly. The business end of the peg can now be sanded/bevelled to the desired shape, before fitting selected tips in place.

I have two sizes with rubber tips (see Henderson, page 274; Wight, pages 76-77) - one has tips 3 mm wide and the other 6 mm wide. Tips are made from ordinary office-use rubber bands which are 3 & 6 mm wide respectively. Cut sections 25 to 35 mm long – these are then glued onto acetate sheet – I use portions of the “plastic” boxes in which dress or business shirts are packaged.

Tips are then glued onto pre-shaped pegs, acetate on the outside so that when the peg is closed, the extended 3mm rubber tips are just touching. With the larger size, we leave the rubber tips about 6 mm apart – this is done to hold larger specimens.

While the rubber gives a cushioned and good gripping surface, the acetate backing stiffens the rubber and strengthens the gripping power slightly, sufficient to hold small specimens without damage. To further improve the gentle action of the “tweezers”, cut a 6 mm square of rubber band and glue it to one inside edge of the original peg jaws to cushion the closing action.

Acicular sprays of natrolite, gypsum, aurichalcite or other delicate crystals can be picked up quite safely with these tools. As the tweezer is self closing, once the specimen is gripped, it will stay held in place without fear of crushing. Gripped specimens can now be inspected under the ‘scope, dunked into the ultrasonic for cleaning or positioned for pedestal mounting (see Speckels, page 61) without any further effort or change of holding pressure.

These wooden peg tweezers can also have the tips modified to duplicate the benefits of other styles of self-closing tweezers, at a fraction of the cost of commercially produced tools. Lengthen the “peg” handles as before, always make them with the “rails” as outlined above, and square off the business ends with a small saw or sander. Carefully drill the ends longitudinally with a 3 mm drill bit and about 20/25 mm deep. I use sections of broken bicycle spokes epoxied into these holes and extending 7 to 10 cms.

Inside edges of the spokes can be ground flat for 20 mm or so from the tip, using gentle pressure on each side of a grinding wheel. The result is a self closing tweezer – if points do not match perfectly, bend one or both spokes until they meet satisfactorily. Any variation in length can be ground back and smoothed on the grinder.

Make two as above and on completion place one set of tips in a vice and gently bend the tips to between 60 - 90 degrees as preferred, to make a variation – curved tip self-closing tweezers.

For another variation, instead of bike spokes try “paddle-pop” sticks (the wooden handles in frozen ice cream treats). Use a sharp knife to remove equal amounts of wood from inside the peg jaws and glue 2 trimmed paddle pops into the rebates so formed. Result is 10 cm long parallel jaws of thin, flexible wood which will open to about 30 mm and hold larger or heavier specimens.

I use these all wood tweezers to hold small specimens while giving them a quick wash and rinse in the ultrasonic cleaner.

### **Bibliography:**

Henderson, W., 1980, Microminerals. Mineralogical Record Vol 17 #4, pp 273-274.

Speckels, M., 1965, The Complete Guide to Micromounts, pp 61-62.

Wight, Q., 1993, The Complete Book of Micromounting, pp 76-77.



## Arthur Roe Memorial Micromount Symposium, Tucson, Arizona

Photos and text – Steve Sorrell.

The theme at Tucson this year was the minerals of Arizona, coinciding with the Centenary of Arizona's Statehood.

This is the third time that I have been to Tucson, and as on previous visits, I was able to find some interesting microminerals from various shows around the city. A few in particular come to mind:

- ☒ Chris Lehmann at the Hotel Tucson City Center (formally the Inn Suites and still known by that name) who had some really nice California Anatase specimens.
- ☒ Mineral and Fossil Showcase dealers where JaM's Rocks' Jack Crawford had some interesting chrysocolla after boleite and pseudoboleite amongst other things.
- ☒ Shannon and Sons Minerals ([www.shannonsminerals.com](http://www.shannonsminerals.com)), who had a presence at a number of shows. Michael Shannon had some interesting tellurate species.
- ☒ The old Executive Inn where German dealer Mikon Mineralien ([www.mikon-online.com](http://www.mikon-online.com)) had a diverse range of rare species.

Of course, if you are after rare species, there are also a number of dealers to visit such as Russian dealers, Gunnar Farber, and others.

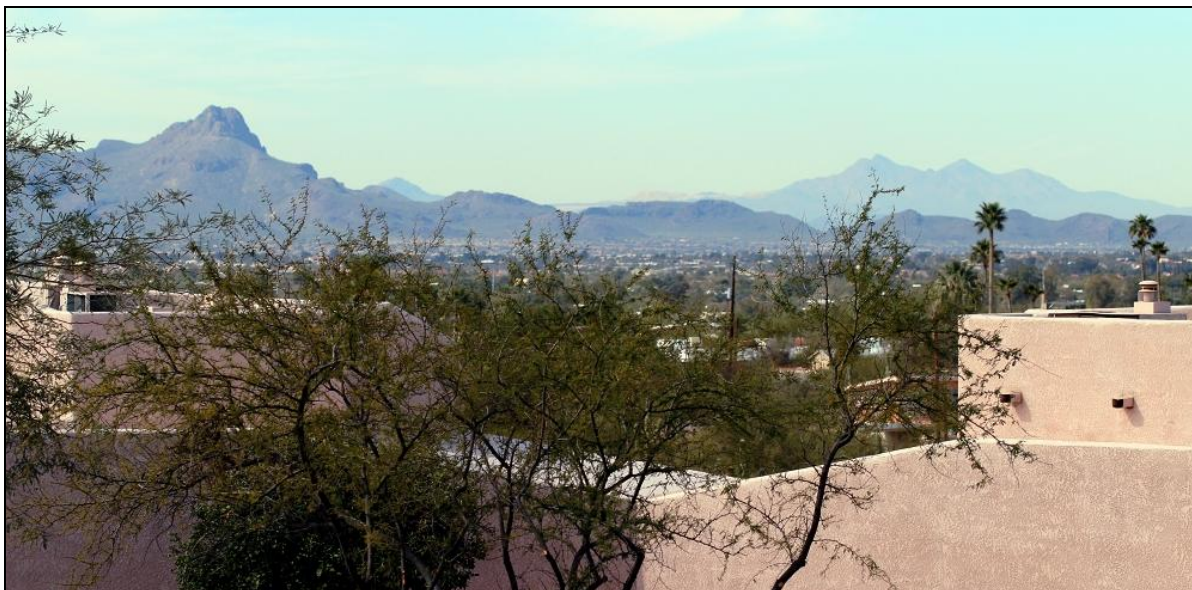
The Arthur Roe Memorial Micromount Symposium is held on the Friday of the main show. It was refreshing to hear *only* talks on Arizona. All too often, the theme is only loosely followed, if at all. The following excellent presentations were given:

- ☒ Collapse Breccia Pipes – A Unique Copper Mineral Occurrence in Arizona, USA, Ray Grant.
- ☒ The Micro Minerals of Tiger, Arizona, Bob Meyer.
- ☒ Bill Hunt's Arizona Micromount Treasures, Harvey Jong

As usual, following the sessions, the back of the hall was opened up to tables full of micro give-aways. As on previous trips, this was an enjoyable day.

There was one case in the main show that was of particular interest to micro people. It contained specimens of Arizona minerals mounted by the person for who it was named.

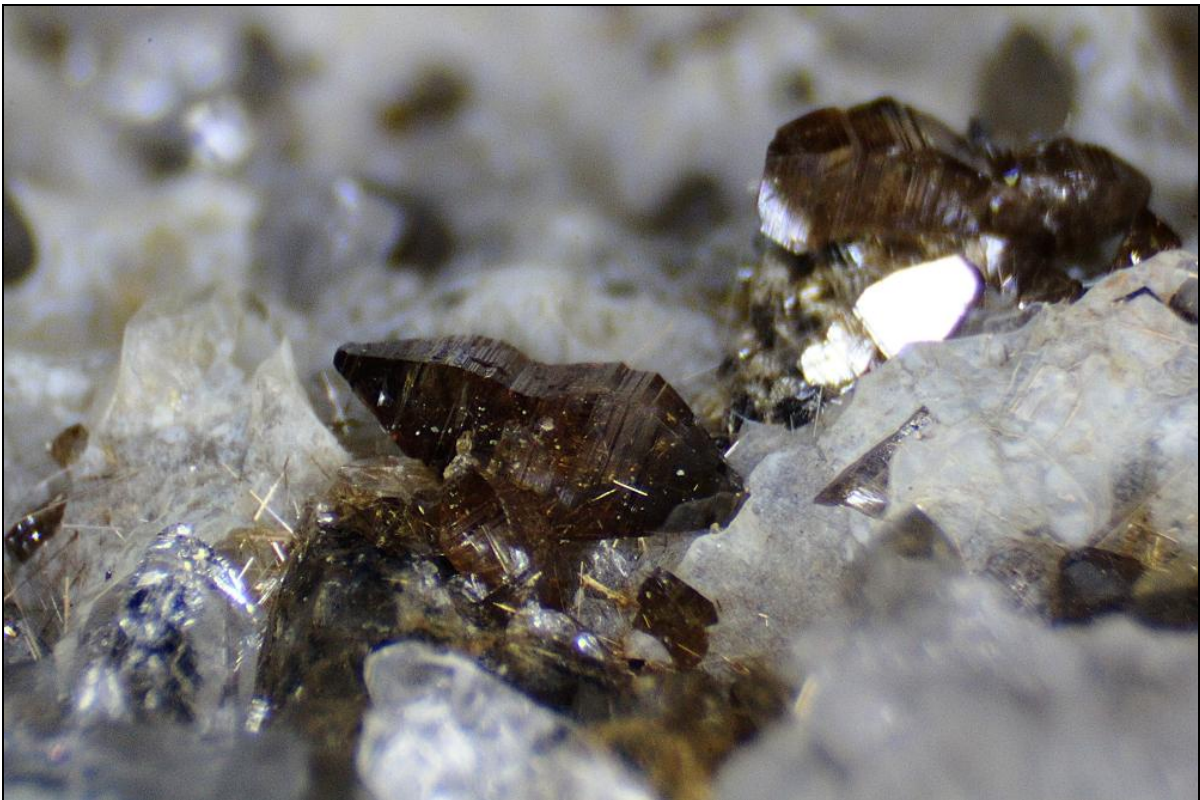
A typical Tucson scene – looking towards the Tucson Mountains from the Westward Look Show...





Chris Lehmann, Lehmann Minerals

Anatase and rutile, White Mountains, Inyo Co., California, photo width 11mm, acquired from Chris Lehmann







Jack Crawford (left), JaM's Rocks, with our own Prof Pete Williams and Sheryl "shopping".

Michael Shannon, Shannon and Sons Minerals.



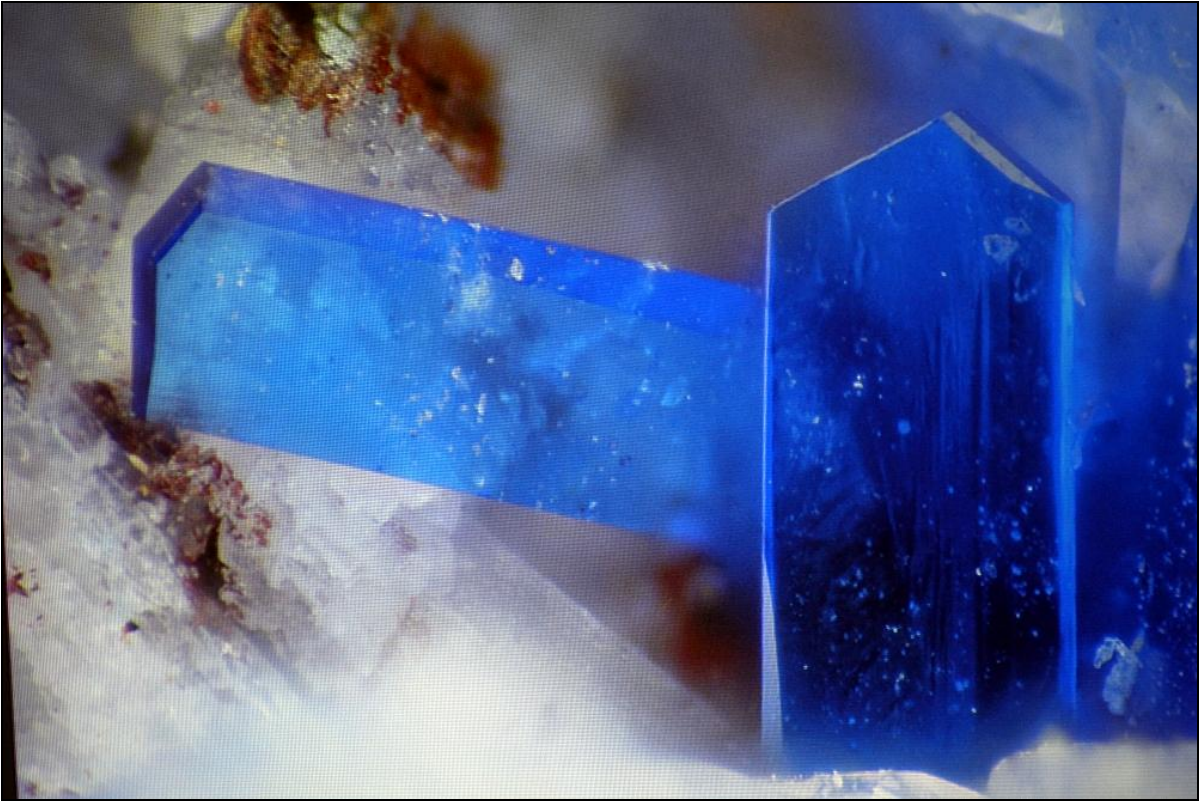


Ray Grant.

Harvey Jong.

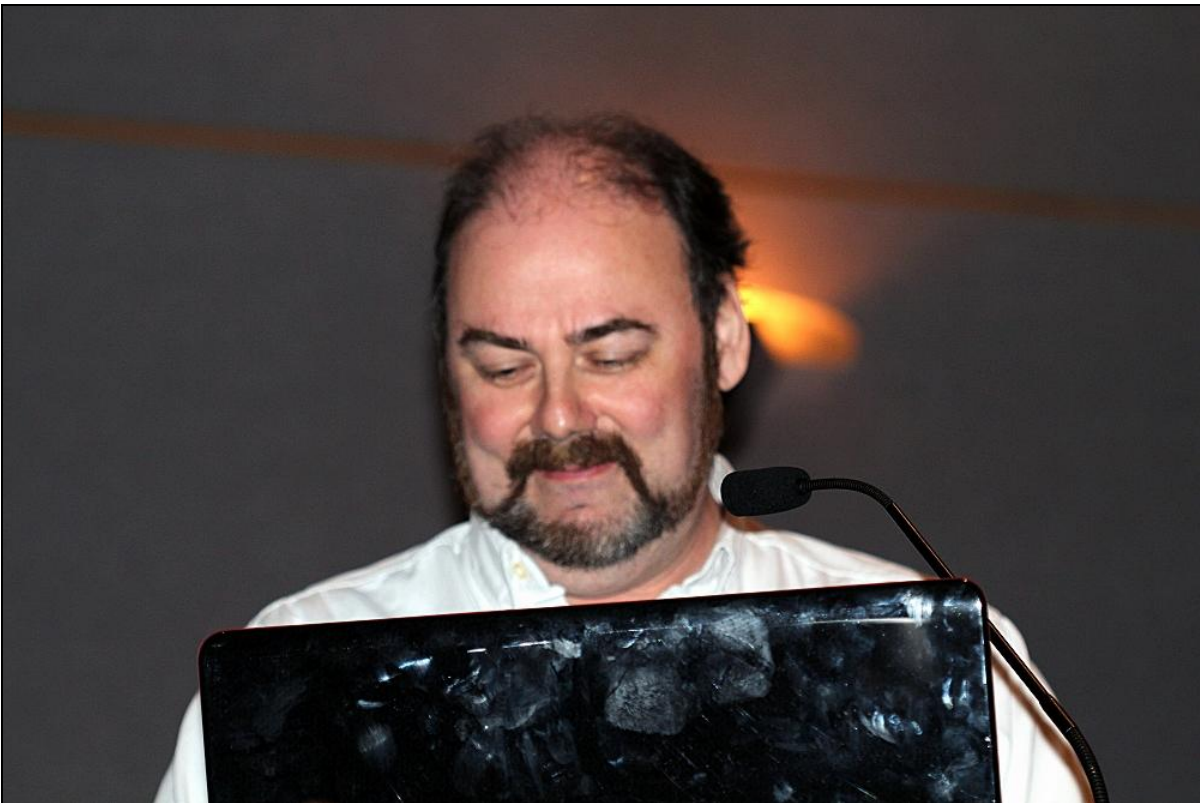


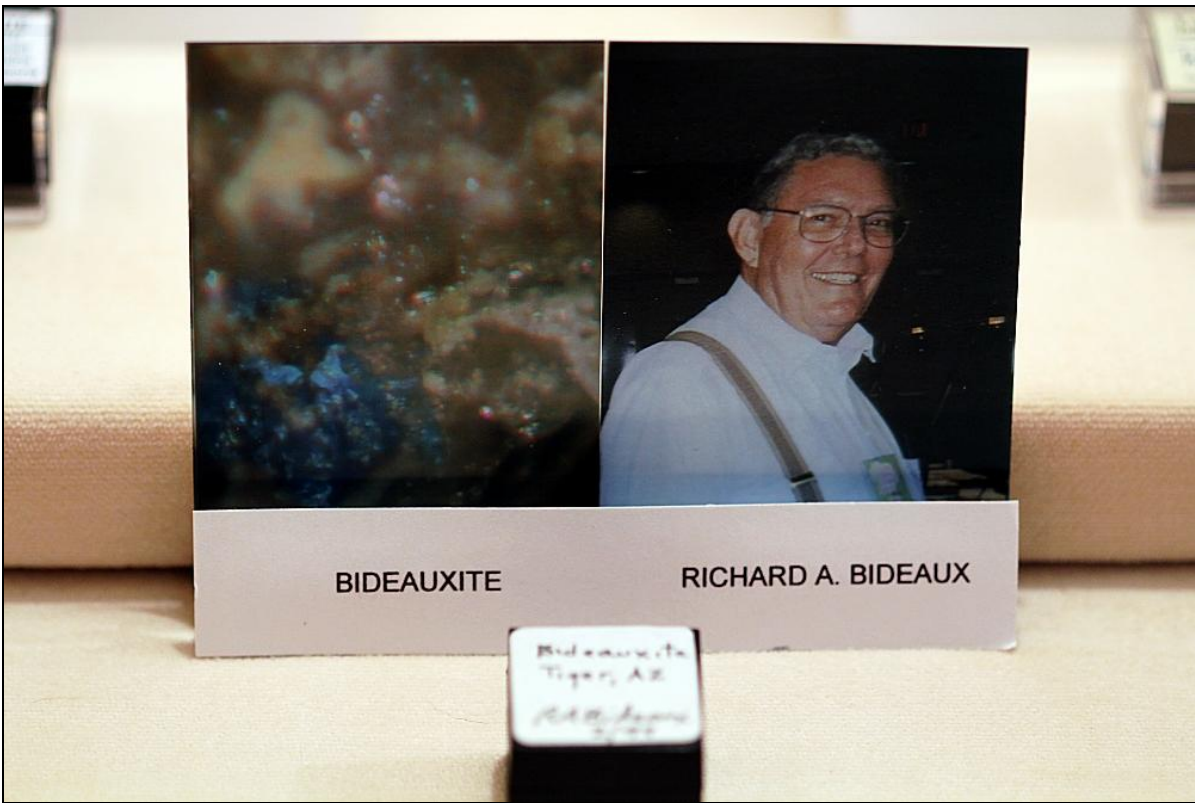




Linarite, Tiger, Arizona, Field of View close to 1.6mm. Photo of one of the slides presented by Bob Meyer.

Robert (Bob) O. Meyer.





Bideauxite mounted by and named after Richard Bideaux.

Markascherite mounted by and named after Mark Ascher.





## 2012 Gemkhana, Shepparton, Victoria

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Photos and text – Steve Sorrell.

The March long weekend is when the annual Gemkhana is held. This year it was held at Shepparton. As we had just moved to Ballarat a week earlier, the short drive of around 200km was not too much effort. Unfortunately, what should have been about 2.5 hours turned into 5! Need to keep a better eye out for road signs.

We eventually arrived just in time to see John Haupt leaving and having missed out on catching up with friends from Bendigo.

There were a few mineral dealers inside the hall, but the main attraction for me was the tailgaters. These were spread out under cover in a very large open shed. This has some advantages, particularly for the tailgaters who can spread out, and there is plenty of room to move about. A big disadvantage with this venue though was the poor lighting.

A few of the tailgaters had micro material, in particular Ian Everard who as usual, had some interesting South Australian and Broken Hill material, John and Betty Weir, BK Minerals, and George and Shirley Williams.

I only spent a short time looking through the available specimens, but did find some things of interest, and then returned to the hall to have a look through CK Minerals' specimens ([www.ckminerals.com.au](http://www.ckminerals.com.au)). Cyril always has something interesting. Although not micros, he had a number of interesting Mn calcites recently found at Broken Hill.

All too soon, it was time to begin the five hour trip back to Ballarat. Actually, a little over two hours. We didn't get lost on the return trip!



Clockwise from top left:

- Ian Everard
- Cyril Kovacic
- George Williams

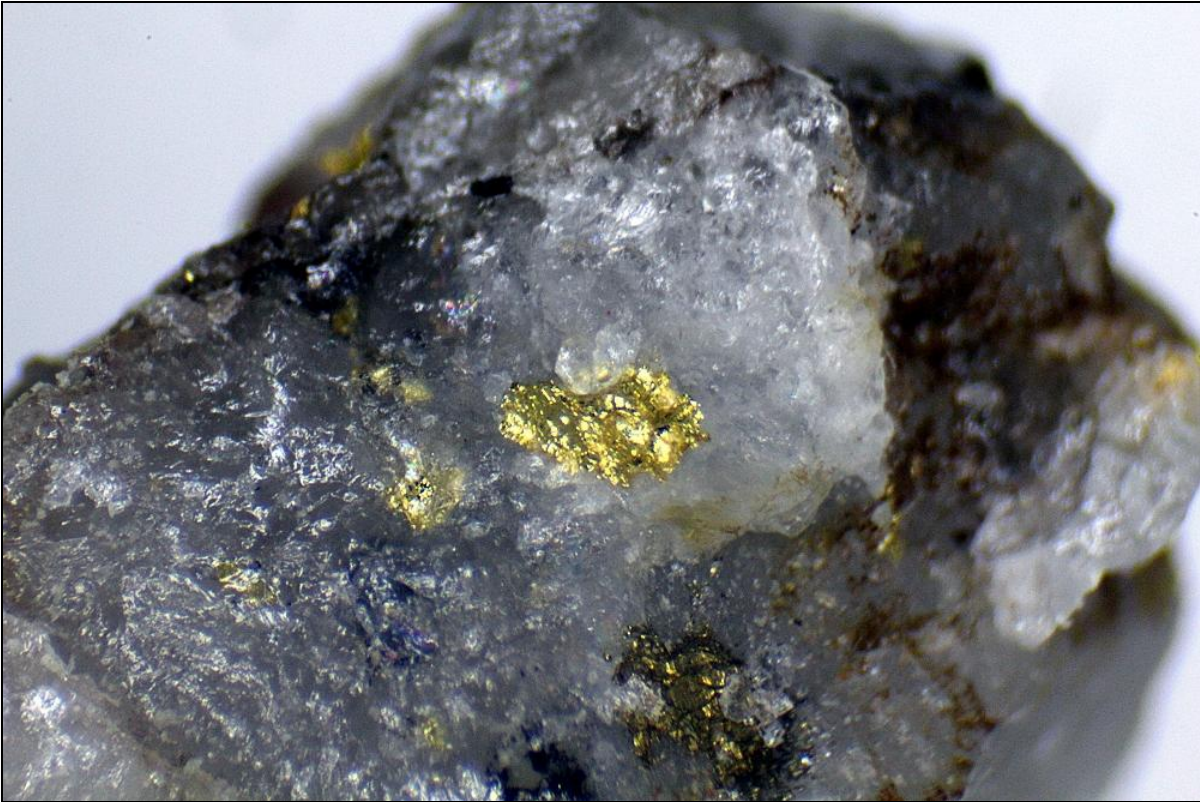


Selection of micros from the Fairview Quarry, Robertstown, South Australia, available from John and Betty Weir. Many specimens at \$2 each.

Selection of micros available from Ian Everard. Many specimens at \$2 each.







Gold, Kambalda, Western Australia, photo width 5mm, acquired from Ian Everard for \$2.

Wavellite and Cyrilovite, Fairview Quarry, Robertstown, South Australia, photo width 5mm, acquired from John and Betty Weir for \$2.





Goulburn Valley Club Stall at Shepparton. Lots of Mooralla specimens for sale.

## **Classifieds**

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Want to advertise something related to micromounting or microminerals? You can do so here. Willing to trade or sell, want lists, etc. Simply email the editor: [steve@crocoite.com](mailto:steve@crocoite.com) to get your listing in the next issue. Please keep ads as short as possible.

### **Mineral Paradise – Richard Bell**

Periodic listings of mainly British micro and thumbnail-sized mineral specimens made available for sale or swap. To view, go to <http://www.mineral-paradise.net>

### **Sauktown Sales – Jim Daly**

Periodic listings of micro mineral specimens for sale. Jim also sells micromounting supplies. To view, go to <http://www.sauktown.com>

### **The Mineral Pocket Created by Nature – Steve Sorrell**

Minerals for sale by auction, many micro-material specimens regularly listed. To view, go to <http://crocoite-rockroom.blogspot.com>