



**THE  
MINERALOGICAL SOCIETY  
OF  
NEW SOUTH WALES INC**

C/o School of Natural Science  
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**NEWSLETTER**

**AUGUST 2013**

**The August Meeting is the Society ANNUAL GENERAL MEETING and will be held on Friday the 2nd of August 2013 at 7.30 p.m. in the LZG14 lecture theatre on the ground floor of Building LZ in the Science campus of the University of Western Sydney on the corner of Victoria Road and James Ruse Drive in North Parramatta.**

**2013 ANNUAL GENERAL MEETING**

The A.G.M. will commence at 7.30 p.m. with the President's report for 2012/2013 followed by the Treasurer's report and presentation of the annual financial accounts for 2012/2013 and the election of the Society Committee and office-bearers for 2013/2014.

The minutes of the previous 2012 A.G.M. were circulated in the September 2012 Newsletter. Copies of this will be available at the 2013 A.G.M. or may be obtained from the Secretary.

During the A.G.M. any other business may also be raised and discussed.

The Election of Office-Bearers for 2013/2014.

In accordance with the Society Constitution the entire current Committee retires at the commencement of the A.G.M. and all positions are open for nomination and election. Nomination forms for election to the 2013/2014 Committee were circulated with the July Newsletter and nominations should have been received before the commencement of the A.G.M. A member can be nominated for but cannot hold more than one position. Only financial and Honorary Life members of the Society are eligible for nomination or allowed to participate in any voting.

After the A.G.M. has been concluded the Betty Mayne Memorial Lecture will be given this year by Ian Graham on : -

**“Gold Deposits of Woodlark Island, Papua New Guinea”**

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## FORTHCOMING MEETINGS

Meetings will be held on the first Friday of each month for the rest of the year except in October when the Meeting will be deferred to the second Friday because the first Friday is before a long weekend.

Subject to circumstances some changes to the following schedule of program subjects and speakers may have to be made in due course.

September 6th: The program will include lectures to be given by John Chapman on : - **'Types of Tin Deposits'** and by John Tottenham on : - **Pine Ridge Cassiterite**.

Members will be asked to bring in specimens of tin minerals to help illustrate the lectures and could start looking now to their collections to select tin minerals to display at the September Meeting.

October 11th: (The first Friday in October is before a long weekend and the Society Meeting will therefore be deferred to the second Friday).

There will be a lecture given by Professor Peter Williams on **Bronze Age Minerals and Metallurgy'**

November 1st: The program will be a **Member's Display of Their Favourite Fluorites**, - A discussion led by Gary Sutherland.

December 6th: Annual Christmas Social and 'Swap n' Sell.

February 7<sup>th</sup> 2014: Talks by Gary Sutherland, Dieter Mylius and John Rankin on :- **'Some British Mines & Minerals'**

March 7<sup>th</sup> 2014: Lecture by George Stacey on **'My Recollections of Mt Isa – The Mine in the Spinifex**.

April 4<sup>th</sup> 2014 Program to be confirmed but may include a lecture on **Skarn Type Mineral Deposits**.

May 2<sup>nd</sup> 2014: **Member's Mini-Auction**

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## JULY MEETING

The Meeting was opened by the Vice-President, John Chapman, in place of the President, Dieter Mylius, who was overseas. There were a number of announcements

John Chapman complimented all the people who had contributed to the Mineralogical Seminar in June particularly noting the event was attended by about eighty people who were treated to a series of excellent talks by the fourteen speakers. Associated activities, the home collection visits, Australian Museum tours and the field trip were also well attended.

The Vice-President advised that the Tambar Springs field trip was still scheduled for September over the period, Friday to Sunday, the 20<sup>th</sup> to 22<sup>nd</sup> and asked for a show of hands of people who would be interested in going. He recommended that people e-mail him to confirm this.

Brian Holden drew member's attention to the forthcoming **AIMEX 2013** exhibition to be held at the **Showgrounds, Sydney Olympic Park** over the four days of the 20<sup>th</sup> to 23<sup>rd</sup> of August. He had brought in a number of flyers describing the event.

The **Asia-Pacific International Mining Exhibition** is held once every four years and features about 600 exhibitors demonstrating all manner of mining equipment, including up to large earthmoving vehicles. Information on the event can be found on the Internet on : - <http://www.aimex.com.au> The exhibition is intended primarily for industry representatives, and traders and whilst entry is free visitors would be required to register.

John Chapman drew attention to a tray of minerals that he had brought in to dispose of for a dollar each to Society members. The specimens were from a collection acquired in 1923 and built up by an HO Evans, who was manager of the Sulphide Corporation and had built up quite a collection of Broken Hill minerals. Some of the specimens may have been added later by the manager's son but ones with hand-written labels would be of the original vintage.

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The Vice-President asked Graham Ogle to introduce the speaker for the evening.

Graham Ogle announced that he was pleased to introduce the speaker Michael Waterhouse, who was a friend of his who he had met through New Guinea connections. Michael Waterhouse is a retired economist and trained at university as an anthropologist in his undergraduate days and has quite an illustrious family history in the mining industry which led him to investigate the history of gold mining in New Guinea and was able to acquire the film that he would show later in the evening.

Graham Ogle had stumbled on the Bulolo gold field when he was a medical student and had visited Lae in New Guinea in 1982 to observe at the Angau Memorial Hospital. With a friend he had decided to go and visit Wau near Bulolo over a weekend. This involved flying to the Wau airfield but then in trying to find some means of travelling to Bulolo which was some 20 km away they decided to walk. In approaching Bulolo they came upon a valley with a massive mechanical structure, one of the gold dredges which would be described in the lecture, and which prompted the astonished thoughts for the two visitors as to how on earth such a huge structure had been transported to this relatively remote location. The story of the transport of the dredge and other equipment and the gold-mining in this location would be the subject of the speaker's lecture and would be illustrated by a PowerPoint projection of images of the mining area through the 1930s and also by a short video film.

## **‘New Guinea Gold. The Story of the Wau Bulolo Goldfields in PNG’**

### **Michael Waterhouse**

Michael Waterhouse commenced his lecture by pointing out that the New Guinea gold fields between the wars were the most important ones in Australasia, second only to the ones in Western Australia, but very few people know about the work that was done there. Unfortunately much of the records of the period of mining in to the 1920s and 1930s in New Guinea were destroyed during the Second World War, which for New Guinea commenced early in 1942 when the Japanese invaded.

Between 1884 and 1914 the north-eastern part of New Guinea was a German colony with the south a British Protectorate. The British territory was assigned to Australia to administer from 1906 as the Territory of Papua and with the outbreak of the First World War Australian forces took possession of the

north. The whole of the eastern half by then known as Papua New Guinea was administered by Australia from 1920 until becoming independent in 1975 except for the imposition of the Japanese military occupation between 1942 and 1945.

Due to the speaker knowing that his grandfather, Les Waterhouse, had worked in New Guinea through the 1930s and having been asked to write an article about him he had decided to research the history of the area and period. The speaker found this would be with some difficulty due to the sparsity of records but he had persevered and gradually collected a large amount of information including many images and some film footage of life and work on the Bulolo goldfields. The research initially into his grandfather's working in Papua New Guinea in the 1920s and 1930s had led the speaker to be examining a period of development in the country which was not well documented but involved an impressive story of hard work, vision and determination by a number of Europeans helped by many local labourers working against substantial and daunting geographic and climatic conditions. His extended research into gold-mining in PNG had led to the writing and publishing of his book "**Not a Poor Man's Field**".

What Michael Waterhouse wanted to do this evening was to open the door a little on the early gold-mining years in New Guinea and also describe something of his grandfather's work there.

Les Waterhouse was a mining engineer and had been the Australian director, based in Sydney, of a small Canadian mining company called Placer Development Ltd which had headquarters in Vancouver. Whilst today Papua New Guinea has several very large gold mines such as OK Tedi, Porgera and Lihir, the first gold to be discovered in New Guinea was early in the 1920s along the Bulolo River and tributaries, notably Edie Creek, in the vicinity of Wau. What became known as the Morobe gold field was worked by a number of companies through the 1920s and 1930s up to 1942, Placer Development being one of those early into the field.

The man credited as being the first to discover gold in the Morobe district was named 'Shark-Eye Park' and for a time in 1922 was quietly gleaning an amount of gold with the aid of sluice boxes from Koranga Creek, a tributary of the Bulolo. 'Quietly' because mining was not permitted at the time by Australian authorities. Gradually the fact that he was finding some gold came to the notice of a few other Europeans in the area and by 1926 a small number of them with groups of local labourers were working various stretches of the Bulolo and some of the tributaries. Then a prospector, Bill Royal, who had been working up Edie Creek famously reported back to one of his companions, Dick Glasson, that he had found when panning an upper stretch of the Edie an amount of material that :- *"It looks like gold, but it can't be. There's too bloody much of it"*. Glasson and Royal travelled back to the site and worked for a few more days, no doubt to be very pleasantly surprised. Sometimes their pans *'contained more gold than sand!'* Later they were to state that many of their panning dishes contained up to 20 ounces of gold at a time and in taking others of their syndicate up the Edie and working the site for six weeks they recovered 7,600 ounces, worth then about £15,000.

Wau is situated inland about 75 klm from the north coast of PNG, the nearest ports being Lae and Salamaua, the terrain in between being extremely rugged, much of it mountainous with initially no reliable roads or even good tracks. All supplies and luggage had to be carried in by porters. This did not deter many Australian prospectors and hopeful miners after the reports of gold strikes making their way into the area leading the New Guinea Administrator Evan Wisdom in 1926 to issue a warning that given the difficult terrain and climate affecting the ability to work and obtain supplies, the gold deposits *'were not a poor man's field'*. The Administrator's reasoning was that a man with limited supplies, equipment and capital to keep himself going might make a living from a poor field in Australia but not in the New Guinea interior where many more supplies, equipment and means to pay local labourers would be needed to establish a viable operation and income.

The then Acting District Officer for the Morobe District, Cecil Levien, decided on the basis of having taken the trouble to inspect the Koranga Creek workings to take up mining himself. His drive and determination were to change the course of New Guinea's history. He soon resigned his position as District Officer, then applied for and was granted a Miner's Right by the Mining Warden, Jack Lukin, and started pegging out leases. Within a few months Levien had persuaded a few investors to form a company - Guinea Gold NL to work the claims.

Levien had also recognised that air transport would be essential to develop the area and by the end of 1926 further persuaded his directors to purchase a small De Haviland DH37 biplane. Gradually other biplanes were acquired and after another two years Levien persuaded the company to buy two Junker W34s. These could carry up to 2,000 lbs weight of cargo, a considerably advance on the biplanes. By then the company had accepted Levien's recommendation to form an airline, Guinea Airways Ltd, to run the air operations. Later airplane acquisitions included two Junkers G31s in 1930 which were adapted to carry 7,000 lbs of freight which could be loaded through a large hatch in their roofs.

After about two years operating Guinea Gold had become financially stressed and in 1928 the board entered into a joint arrangement with Placer Development which injected much needed capital and expertise. Some two years later in 1930 Placer Development established a new company, Bulolo Gold Dredging (BGD), to bring in components to construct and operate large dredging machines all parts for which had to be flown in. Since the dredges were electrically-powered the company had to build first one and then a second and then a third electricity generation plant to supply power and also had to fly in the components for these. Other work in 1930 involved building an airfield at Bulolo, the township which had become established nearer to the workings.

The first dredger constructed and put into operation weighed about 1,000 tons, had sixty-three buckets and could dig to a depth of 29 feet. Another similar one was built and then later Nos 3 and 4 a little larger which could dig down to about sixty feet. The largest dredge, No 5, weighed over 2,500 tons, had 118 buckets and could dig down to a depth of 125 feet. Eventually eight were built. All had to be put together on the sites on which they were to be used, the heavy components being flown to Bulolo airfield and then dragged over tracks to where they were to be erected. Once in operation the dredges moved very slowly forward along the rivers, about a mile per year, digging up vast amounts of sand, gravel and boulders, separating out the gold and leaving behind a swathe of churned rocks and spoil.

The two Junkers G31 planes, and later a third one was acquired, were pivotal to the success of the mining operations and the construction of the dredges since only they could carry in the largest and heaviest components. The miners affectionately named the two planes 'Peter' and 'Paul'. They were capable of making four to six flights a day, mostly from Lae to Wau and once its air-strip was constructed to Bulolo, carrying up to three tons of freight. Over the period from March 1931 to January 1942 the planes flew 14,000 trips travelling over 1.4 million miles carrying nearly 40,000 tons of freight and about seven thousand passengers. By contrast over the same period all the planes in Australia transported only 5,000 tons. Over the period there was a motley collection of other planes in use in PNG, many ex-World War One vintage, collectively transporting more than half the amount of freight than that of the major air-freighting countries in the World, in North America and Europe combined.

Over the course of his lecture and with reference to a large series of images and then a length of silent film footage taken during the 1930s of the goldfield development and mining work, the equipment and personnel the speaker described the infrastructure of the mining and related operations. This included the accommodation areas for the expanding workforce, recreation facilities for the European personnel, accommodation provided for the local labour force which grew to over twelve thousand, the expansion and improvement of the port facilities for constantly off-loading large amounts of supplies, and constructing and operating the large dredging machines.

However as Michael Waterhouse said, all good times must come to an end, the mining operations in the Morobe district ending abruptly with the outbreak of war in the Pacific. Evacuation of Europeans in New Guinea commenced from 12<sup>th</sup> December 1941 and air raids on the ports of Lae and Salamaua commenced on 20<sup>th</sup> January 1942. Specifically and sadly for the two workhorses, 'Peter' and 'Paul', the end for them came at 12.30 p.m. on the 21<sup>st</sup> of January 1942. Shortly after one of the G31 planes had just landed with a cargo of beer a flight of five Japanese Zero planes came over the Bulolo airfield and destroyed the planes at the beginning of what was to be two long years of war on the New Guinea mainland and brought to a close an era unique to New Guinea and Australian history.

At the end of his lecture Michael Waterhouse answered a number of questions.

The research that the speaker had conducted since he started on the historical project was described notably his attempting to date many of the images and parts of film that he had located, some held by the Mitchel Library and other material in the National Archives. He had located about two hours of film, mostly black and white and silent from the New Guinea pre-war mining period

Over the 1930s period of mining the Morobe field about 1.2 million ounces of gold had been recovered. To the speaker's knowledge there were never any large nuggets found. Most of the gold was entrusted to the postal service and transported by air to Australia for which purpose £5 postage stamps were printed in 1936 or 1937 and made available at Bulolo. This was a particularly high-value stamp for the time, £5 in those days would be worth about \$400 today but was provided specifically to pay postage on the gold shipments. Parcels of gold were posted by air from Bulolo and were apparently often used as foot-rests by passengers as they flew to Port Moresby! Once there however the casual treatment of the parcels of gold by passengers was replaced by officials with serious faces and manners and armed guards bustling about to look after it.

Mining operations by most of the 1930s companies and some of the personnel gradually recommenced after 1945, not including Les Waterhouse who died in that year. Much equipment and infrastructure and all the accommodation buildings had been destroyed in 1942 most of it by the Australian army conducting a 'scorched-earth policy to deny facilities to the Japanese. The dredges survived this mainly due to the efforts of Les Waterhouse who recommended to the army that the dredges should be disabled by removing key components but otherwise left undamaged. After 1945 War Reparation compensation was also made available to the companies for the damage with some two and a half million pounds paid to them and mining operations were able to recommence. Over the next several decades about another one million ounces of gold have been produced.

Also after 1945 the building of a reliable road into Bulolo from Lae considerably reduced the significance of air transport although with a large plywood manufacturing plant established at Bulolo in the 1950s by Placer Developments as they were winding down their gold mining operations there is still a considerable amount of traffic by air as well as by road. Bulolo today is quite a large town of about 20,000 people whereas Wau has languished considerably from its peak in the 1930s when it was larger than Rabaul and had about a thousand European residents compared to just a handful today.

There is still gold in the area and visitors to the Bulolo River today will find pockets of local people working patches of ground. Much larger operations are also underway or being examined. Newcrest Mining and Harmony Gold of South Africa have established a joint operation near Edie Creek called Hidden Valley and which the companies believe will produce as much gold as came out of the Bulolo valley. The two companies are also investigating another deposit near to Lae which they believe may contain up to 28 million ounces of gold and a lot of copper.

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The entire story of Michael Waterhouses's research into the Morobe gold field operations through the 1920s and 1930s is dealt with very thoroughly and in great detail in his book : -

### NOT A POOR MAN'S FIELD

The New Guinea Goldfields to 1942 – An Australian Colonial History.

The book carries a Foreword by Professor Ross Garnaut (AO) Vice-Chancellor at the University of Melbourne and a comment by him on the back cover is quoted here, : *'A sustained effort of scholarship. It is a wonderful book, rich in insights into the human condition.'*

It is surely an important historical narrative. Copies of the book were available at the Mineralogical Seminar in June and at the July Society meeting for \$45. There are still a few being held for buyers by the Treasurer Graham Ogle. Members interested in acquiring the book could contact him.

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## FORTHCOMING EVENTS

### GEM SHOW by the BLAXLAND GEM & MINERAL CLUB

Over Saturday and Sunday, the 17th and 18th of August  
Being held in the Glenbrook Community Hall, Great Western Highway, Glenbrook, NSW  
(Next to NPWS). Just west of Information Centre.  
Displays of lapidary work and gem, mineral and crystal sales. Refreshments available.  
<http://www.freewebs.com/blaxlandgemmineralclub/BGMCshow.htm>  
8 am to 4 pm Daily. Entry: Adults: \$3 Children \$1

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### GEM, MINERAL AND FOSSIL FAIR

Saturday & Sunday the 24th & 25th of August.  
From 9:30 to 5pm on Saturday and 9:30 to 4pm on Sunday.  
Being held in the **Ron Mullock Room** in the **Panthers Club, Mulgoa Road, Penrith.**  
Entry is just to the right of the reception desk when entering the main club foyer.  
There will be a big banner and a couple of largish amethyst geodes to guide the way.

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### GEMKHANA 2013

In the Showground on Duoro Street in Mudgee over the October long weekend from Saturday October 5<sup>th</sup>  
- 10.00am-5.00pm; Sunday October 6<sup>th</sup> - 10.00am-5.00pm; & Monday, October 7<sup>th</sup> - 9.00am to noon.

'The Annual Gem & Mineral show and Competition of lapidaries from across NSW.  
Presented by the Gem & Lapidary Council of NSW Inc'

'The competition brings entries from all across NSW and quite a few from interstate. Dealers and tailgaters will have jewellery, tools, books, machinery, minerals, cut stones, opal and findings.

We will have children's activities. Refreshments will be available.

There is wheelchair access and plenty of parking. On-site camping is available

Contacts are Arthur 02 4572 5812, Marilyn 02 9635 8218,  
*www.gemlapidarycouncilnsw.org.au* for info and link to secretary.'

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## **CANBERRA LAPIDARY CLUB**

### **SPRING GEMCRAFT & MINERAL SHOW**

Sat 2<sup>nd</sup> & Sun 3<sup>rd</sup> November 10.00am to 5.00pm

In the Parkes Room, Exhibition Park, (EPIC), on Northbourne Avenue, Canberra

\$5 adults, \$9 family, \$2 children/concession.

Gem & lapidary dealers, Minerals, opals, beads & supplies, rough & cut gemstones,  
lapidary equipment & supplies, fossils and jewellery.

Displays of members' collections, free sessions on fossicking & gold detecting, capping & faceting.

More information on *www.canberralapidary.org.au* ; or Phone: 02 6281 3312

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## **FESTIVAL OF MINERALS AND GEMS by the ILLAWARRA LAPIDARY CLUB**

Saturday & Sunday 2<sup>nd</sup> & 3<sup>rd</sup> of November, 10.00am to 5.00pm

at the Ribbonwood Centre, Princes Highway, Dapto.

*http://www.illawarralapidaryclub.com.au/*

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## **PARRAMATTA-HOLROYD LAPIDARY CLUB ANNUAL EXHIBITION**

Friday 8th, Saturday 9th and Sunday 10th of November.

From 9am to 4pm each day

At the Club Rooms at 73 Fullagar Road, Wentworthville, Sydney.

'Competition, sales, demonstrations, children's activities, sand sieve,  
fossicking heap, refreshments. Wheelchair access and plenty of parking

Contact the Club on 02 9636 7843 or *http://www.freewebs.com/parraholydlapidaryclub/*

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## **ANNUAL JEWELLERY SHOW by the NEWCASTLE LAPIDARY CLUB**

The Newcastle Lapidary Club will be holding their annual jewellery show  
on the weekend of 9<sup>th</sup> & 10<sup>th</sup> of November 2013.

The Show is in the club rooms at 2 Dora Rd Adamstown, Newcastle, NSW.

Starting times on both days are 9.00am and finish at 4.00pm.



Rocks, tools and jewellery will be for sale.  
There will be a sausage sizzle, devonshire tea, coffee and drinks.  
Parking is available and admission is free.

For more information contact the club 0249529611 or email [newlap@gmail.com](mailto:newlap@gmail.com).

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