



Gem & Lapidary News
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2024

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Gem & Lapidary News is the official publication of the Gem and Lapidary Council of NSW Inc, PO Box 188 Orange 2800. The executive and workforce of the Council are entirely composed of delegates from member Clubs. Council is NOT an autonomous body. The Gem & Lapidary Council is a member of AFLACA (Australian Federation of Lapidary and Allied Crafts Association). **Life Councillors:** Joan Ball (dec), Ron Beattie, Arthur Roffey (dec), Frank Hall (dec), Dot Caladine (dec), Maurya Hutton (dec), Marie Jenkins (dec), Dick Moppett (dec) & Bob Wright (dec).

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Social Media Officer	Kim Cooke
AFLACA J&R delegates	Barbara Try (voting) and Kathy Selwood (non-voting)
Archivist	Barbara Try

COUNCIL MEETINGS**Visitors welcome to attend**

Executive - meet Monthly, fourth Wednesday of the month, 1pm, at Clubrooms, Parramatta-Holroyd Lapidary Club, 73 Fullagar Rd, Wentworthville, NSW

NEXT COUNCIL MEETING: 27 November 2024

EDITOR'S NOTES

We are back from a good show in Broken Hill and its hard to believe that Christmas is less than two months away

I hope you enjoy this newsletter.

If you have an article, or a show you wish to advertise in future newsletters, please send them in.

Due to increased cost for postage and printing please let the Council know if you can receive the newsletter via email only.

ADDRESSES

for the **Gem & Lapidary Council NSW**

Website : <http://gemlapidarycouncilnsw.org.au/>

The website has links to the **secretary, editor & webmaster**

Online edition of the newsletter is in colour.

Post : Gem & Lapidary Council NSW, PO Box 188, Orange NSW, 2800

Meeting rooms: Parramatta-Holroyd Lapidary Club,
73 Fullagar Rd, Wentworthville, NSW

DEADLINES:

Fourth Friday of the month—a few days grace is allowed.

CONTACT THE G&L EDITOR TO INCLUDE YOUR CLUB'S NEWS
editor@gemlapidarycouncilnsw.org.au

ADVERTISING RATES

per **G&L News** edition

(NB: printed in black & white)

Full page - \$40 1/2 page - \$25 1/3 page - \$20

Please send payment with advertising booking and copy

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Message from the President

We have finally finished all the judging for this year with the last lot of Judging for Illawarra Lapidary Club which was on 20th October 2024. While the numbers of entries were down over all the competitions the workmanship is still there.

As I mentioned last month, we had six clubs who had tables in the exhibition hall; they were Blaxland Gem & Mineral Club, Western Suburbs Lapidary Club, Northern Districts Lapidary Club, Port Hacking Lapidary Club, Blue Mountains Lapidary Club and the Sydney Branch of Australian Facetors Guild. I would like to give a big “THANK YOU” to all of these clubs for the assistance they gave to the G & L Committee in helping with the pack up of the show on Sunday evening. Without their help it would have taken us a lot longer. When we left the hall all the tables and chairs were stacked and ready for pickup very early next morning and the Trailer was packed.

There are still a few Clubs that have shows and open days in the next month – they are Illawarra, Parramatta – Holroyd, Canberra and Newcastle. Please view the events page for details of the shows and Open days.

Barbara J Try OAM
President

Minutes of the COMMITTEE MEETING of 23 October 2024**Starting time:** 1pm**Location:** Parramatta Holroyd Club

The meeting was opened at 1:00pm by President Barbara Try (Northern Districts) who welcomed delegates from the following clubs: [Central Coast](#) (Tony Try), [Parramatta/Holroyd](#) (Ray Powell), AFG (Paul Sabolta), [Western Suburbs](#) (Marcia Hill & Ainsley Flynn) Orange (Kathy Selwood), [Port Hacking](#) (Tony Offord), Blaxland (Robert Kneale), Illawarra (Joan Zealy), Campbelltown (Raeleen Robinson).

Apologies: Blue Mountains (Mick Lane, Kim Cooke), Goulburn (Sue & Joe O'Neil), Fairfield (Karen & Jim Waghorn). **Moved:** AFG seconded Central Coast that apologies be accepted.

Minutes of the Previous Meeting: 25 September 2024 Moved Western Suburbs seconded Parramatta/Holroyd that minutes be accepted.

Business Arising from last minutes:

- 1/ Purchase a computer, software, terabyte drive for backup & a small printer,

Correspondence: See attached list**Business arising from correspondence.**

- 1/ Newcastle membership was approved, invoice for membership to be sent from now till Dec 2025

Moved Illawarra seconded Port Hacking that Inward Correspondence be received, Outward Correspondence be endorsed, and business arising be approved.

Reports:

Treasurer's Report: **Moved** Orange seconded Blaxland that the report be accepted and accounts for payment be paid.

J&R Report:

- 1/ NDLC judging 5 October completed
- 2/ Parramatta judging 12 October completed
- 3/ Illawarra judging 20 October completed

GEMKHANA Competition:

- 1/ Posted back entries returned \$37.05
- 2/ Banked \$136.95

Webmaster: No report**G&L NEWS Editor:** No report**Education Report:**

- 1/ Orange minerals (delayed)
- 2/ Nepean faceting course – Dec 2024
- 3/ Lismore jewellery course delayed till next year
- 4/ Port Hacking advanced enamelling to be arranged.
- 5/ Bathurst advanced Enamelling to be arranged.
- 6/ Illawarra carving course Kathy to chase up.
- 7/ Illawarra Jewellery course specifically to do Claw Setting – Ainsley Flynn – next year
- 8/ NSW Lapidary Club – faceting course – Nov 2024

Mail Person: \$96.15 postage & stamps**STATE GEM & MINERAL SHOW**

- 1/ Clubs were thanked for helping to pack up after the Show
- 2/ Banner pole key deposit of \$35.00 needed to be collected
- 4/ How did you hear about us survey was discussed
- 5/ Indoor & outdoor contracts discussed and views on them to be reviewed Jan 2025 meeting

- 6/ 2025 pricing discussed
- 7/ Catering discussed
- 8/ Traylor inventory to be scheduled

Social Media:

- 1/Advertising for State Gem & Mineral Show invoices

GEMBOREE

- 1/Parke's Showground
- 2/ Trophies, secretary to chase 2 ideas, with 2 in hand.

Reports to be accepted moved Campbelltown Secoded: Parramatta/Holroyd

GENERAL BUSINESS:

- 1/ Reports to Secretary to be in around next meeting November for Decembers AGM.
- 2/ Discussion on 3D wax printing in casting section of judging manual – this is considered as commercial waxes.

Meeting closed 2.30pm, Next meeting: 27th November, Parramatta/Holroyd

Meeting dates for 2024: 11 December & AGM..

Some Mineralogy and Gemmology Basics Continued

SHEEN

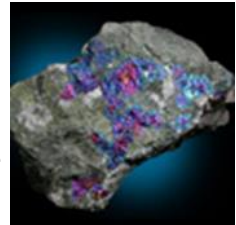
Sheen is the reflection of light from below the surface and is often due to structural effects.

Sheen must not be confused with lustre, which is purely a surface effect.

i/ **Iridescence** – rainbow (produced by interference or diffraction (or both))– cracks and flaws often filled with air or water. This effect is also seen in thin films of oil on water, and in soap bubbles.

There are several types of iridescence that have their own particular causes:

Tarnish: Ore minerals of copper and iron, such as chalcopyrite and bornite, iridescent sheen due to a thin coating breaking up the white light.



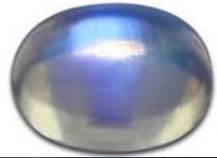
Orient-of-pearl: iridescent sheen on mother-of-pearl, paua shell (Halitosis), and on pearls. (Note that the colour seen in conch or "pink pearls" is a pigmentation and has nothing to do with orient.)



Labradorescence: this grey feldspar can show brilliant flashes of golden yellow, green or purplish-blue flash, reminiscent of oxidation colours seen when steel is being tempered. Labradorite showing particularly intense colours is often referred to as spectrolite. The effect is due to twinning.



ii/ **Adularescence, Schiller** : The characteristic sheen of moonstone



iii/ **Opalescence**: only used for common opal (potch) - the milky translucence of common opal, and the so-called opal-glass,

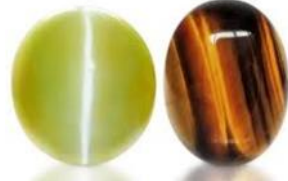


iv/ **Play of Colour**: used for describing precious opal



v/ **Chatoyancy**: Cates eye – is purely a reflection effect due to parallel fibres, tubes or needles of included substances in the stone which, when the stone is cabochon cut, reflect the light as a single bright streak. Hence light rolling across parallel fibres, tubes or needles such as in: (tourmaline, tiger eye, fibre optic).

Types: Quartz Cat's-eye. Tiger's-eye or Silicified Crocidolite. bluish colour of the asbestos (this provides the stone known as "**Hawk's eye**") but the more favoured "**Tiger's-eye**" variety contains iron oxide which imparts to it a fine golden colour. (The heat treated reddish brown variety has been called "**Falcon's Eye**"). In recent years this material has been stained red, green and other colours. **Chrysoberyl Cat's-eye or Cymophane.**



vi/ **Asterism**: stars – mobile star-effect seen in certain sapphires, rubies Corundum, adamantine garnet, spinel, chrysoberly and diopside when correctly cut en cabochon. These stones are sometimes called "asterias".

The effect is of a similar nature to chatoyancy but there are three bright streaks (rays) crossing at 120 degrees, giving a six-pointed star. The effect is generally caused by "silk" inclusions consisting of ultra-fine needles of either rutile or, in some cases, negative crystals (hollow tubes) at 120 degrees to each other. A similar star-effect may be seen in some spinels, almandine garnets and in rose-quartz. The two cubic minerals and chrysoberyl and diopside also generally show only a four-



vii/ **Aventurescence**: occurs when light is reflected from tiny plate like inclusions in quartz (aventurine quartz) and feldspar (aventurine feldspar) as well as a feldspar imitation called goldstone (which has plate like inclusions of copper in a glass body). Light is reflected from the surface of the parallel inclusions. Note that there is no "d" in aventurescence.



NOTE: the display of fire (colours) in Diamond and CZ is due to dispersion and not sheen.

TOUGHNESS:

The ability of withstanding impact – nephrite, jadeite, chalcedony (Quartz crystal, agate)

TENACITY:

Relates to its elasticity or ability to absorb shock without braking or cleaving – mica

Brittle - when parts of a mineral separate in powder or grains on attempting to cut it, as in calcite.

Sectile - when pieces may be cut off with a knife without falling to powder, but still the mineral pulverises under a hammer. This degree of tenacity, intermediate between brittle and malleable, is a desirable property of gem materials used in carving, eg jade, nephrite, serpentine, gypsum and alunite.

Malleable - when slices may be cut off and these slices flattened under a hammer; a property common in metals eg native gold, silver and copper.

Flexible - when the mineral will bend without breaking and remain bent after the bending force is removed, eg talc or gypsum.

Elastic - when the mineral will bend without breaking and return to its original shape after the bending force is removed eg muscovite mica.

TASTE:

Not Recommended (things like arsenic in some minerals)- salt

FEEL:

Greasy – Serpentine

HYDROCHLORIC ACID (HCL):

Mineral reaction to Hydrochloric acid - Calcite, Marble and other CO 2-3 if heated or concentrated. Not to be used on gemstones

DENSITY (SG)

The jeweller knows, also by experience that a sapphire will weigh more than diamond or topaz of the same size. This comparative weight of substances is known as their density; it is measured in standard units such as "grams per cubic centimetre" or "pounds per cubic foot". Density is a measure of the mass (or weight) of a substance per unit volume.

As a matter of convenience, the densities of all substances are related to that of water; this "relative density" or "specific gravity" is then given as a ratio, expressed as a number and not requiring any units.

There are two main methods used in gemmology in determining the Specific Gravity (SG) of a specimen, Hydrostatic weighing and the use of heavy liquids.

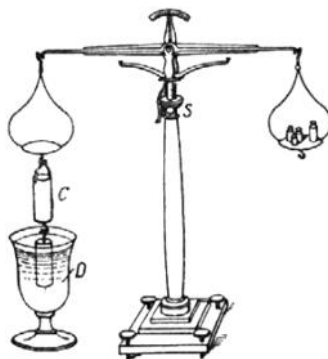
Hydrostatic weighing uses a simple principle discovered by the Greek philosopher, Archimedes, which states that when a body is immersed in a liquid there is an apparent loss of weight: this loss of weight is equal to the weight of the liquid displaced.

Ratio of M/V (mass/volume)

Specific Gravity – Archimedes $W_a \div (W_a - W_w)$

W_a = weight in air

W_w = weight suspended in water



HEAVY LIQUIDS

The heavy liquid method is based on the fact that a stone will float on a liquid of greater density than itself, and sink in one of lower density. If the stone has the same SG as the liquid it will remain suspended wherever it is placed. This is actually a further application of the principle of Archimedes quoted above.

HEFT

Heft Like the jeweller mentioned on the previous page, with practice you can use heft to separate some stone. – Quartz, Topaz, Zircon, Barite, Corundum

Sieving for sapphires, Panning for Gold

Both work on weight of the object you are looking for.



MAGNETISM:

Magnetic properties are useful for identifying a mineral, for if observed it can pinpoint a mineral. Magnetic properties of minerals are defined as follows:

Ferromagnetism describes strong attraction to magnetic fields - Magnetite and Pyrrhotite.

Paramagnetism is weak attraction to magnetic fields - Hematite and Franklinite.

Diamagnetism is repelled from magnetic fields - Bismuth.

Some materials that respond to the magnet:

Some Fe minerals – Peridot, Enstatite, Almandine Garnet

Some NU, Co and some rare earths (synthetic Hematite not Hematite)

Stainless steel – not 925 silver

Synthetic Diamond – with rare earth magnets

Magnetism. one mineral acts as a magnet, generating magnetic fields on its own - Lodestone, the magnetic variety of Magnetite.



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2025 GEMBOREE COMPETITION ENTRIES

BALLARAT VICTORIA

Don't forget entries must reach the Competition Co-Ordinator by Saturday 18 January 2025, So if you haven't started on those entries you best start now!

See <https://aflaca.org.au/gemboree/> for details



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SUN 3 November – 9am to 3pm



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Lunch – Sausage sizzle and
drinks available

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EVENTS

General information on which events are going ahead and which have been cancelled, can be found on the following link:

<https://gemlapidarycouncilnsw.org.au/events/>

- ◇ **2-3 November 2024** Jewellery Gems and Minerals Festival – Illawarra Lapidary Club Inc. – 62nd Anniversary, At Heinger Hall, Ribbonwood Centre, 109 Princes Hwy, Dapto. <https://www.illawarralapidaryclub.com.au>
- ◇ **2-3 November 2024** Canberra Spring Gemcraft & Mineral Show, Exhibition Park (EPIC) – Mallee Pavilion, Norm-0407 718 347, nmenadue@optusnet.com.au
- ◇ **8-10 November 2024** Cavalcade of Colour 2024, Parramatta -Holroyd Lapidary Club.
- ◇ **9-10 November 2024**, Newcastle Lapidary Gem and Jewellery Fair-PCYC Newcastle. Free entry.
- ◇ **24 November 2024** “Open Day” Christmas Market – Illawarra Lapidary Club Inc 51 Meadow Street, Tarrawanna. You can find us at our website <https://www.illawarralapidaryclub.com.au> or like and follow us on Facebook: <https://www.facebook.com/IllawarraLC>
- ◇ **15–16 March 2025**, New England Lapidary Club Annual Show
- ◇ **18-21 April 2025**. Gemboree, Ballarat, St Helens Campus of the Federation University, Victoria