

SMaL-TALK

THE SCOTTISH MINERAL & LAPIDARY CLUB NEWSLETTER

<http://www.lapidary.org.uk>

ISSUE 2016/1

JUNE 2016

EDITORIAL by Wendy Morley

In this edition of SMaLtalk, we have updates on recent club activities, examples of pieces created by members, and an inspiring article on jaspers & agates of the East Lothian coast by David Andrews. If you have any SMLC-related news or stories that you would like to share in SMaLtalk, please get in touch at scottishlapidary@gmail.com or SMLC, 20 Maritime Lane, Leith, EH6 6RZ.

CHAIRMAN'S REMARKS by Ian Marshall

Winter was long ago, Spring has sprung and now we are into Summer. At the AGM in December, some reorganisation of the Committee saw Eleanor Leplatre retire from producing very professional copies of SMaLtalk since 2011, to give birth to her first child - Ian - in late January. Hearty congratulations and thanks for all your efforts in the Club! Scott Porter also retired as Chairman and was due to take over as Editor and update / manage the Club web site. I took over as Chairman, with Alan Hayes acting as Vice-Chairman for this year, Alec McCreadie continues as Treasurer and we are still without a Secretary - anyone willing to help with this would be **WARMLY WELCOMED**.

Reorganisation within the premises also continued, with the Silver Room, Faceting Area & Office all receiving various improvements (referred to later). The side cabinets in the Mineral Room i.e. silver display area for the "At Home", have been stocked with *some* of the Club Collection of Quartz specimens, thanks to Richard - please take some time to view these as our intention is to alter these displays more frequently to let members see much more of the Collection, now that the mineral section has been curated. Also, one of the coffee room cases is being set aside for **NEW / RECENT MEMBERS** to display examples of their work e.g. first stone, best 'find' on a field trip, individual design in silver, 'new' technique attempted, etc. This should encourage other members to give support, constructive criticism or advice *or even inspire them* to attempt something different!

A recurrence of his earlier medical problems meant that Scott had to withdraw from Club activities to focus on regaining his health and we are very pleased to see him making steady progress on his short visits in recent weeks.

Both Club computers had been causing problems and the Committee agreed that it would be best to invest in new equipment, which was sourced and set up by Donald Henderson during February. This then meant that Marie Lindqvist, as Membership Secretary, could contact most members by group e-mail, far more efficiently. Again, many thanks to them both! Otherwise, information has been published each month, as “DIARY DATES” which appear on both notice boards and the entrance door. PLEASE READ THESE. Information advertised included the large display in the Central Library in February; the talks on ‘The Western Isles and St. Kilda’ (Chairman), ‘James Hutton and Dynamic Earth’ (Dr. Hermione Cockburn) and ‘Matthew Foster Heddle - Mineralogist and Mountaineer’ (Hamish Johnstone); display in Moffat Town Hall for the Gold Panning Weekend; Leith Festival; four Training Courses; etc - see later articles.

On a more sombre note, each Committee over the years gives a lot of time and effort to managing the Club for the benefit of all the members and it causes concern and confusion when some decisions are not followed.

The front door **MUST BE LOCKED AT ALL TIMES** as theft has occurred in the past and not to do so negates our insurance cover. During the Leith Festival, when visitors could appear throughout the working week, the display case set up on the tables nearest the door - showing Club silver, faceted stones, agates and mineral specimens - was an easy target for any rogue from the street, as the door was left unlocked at times and there was no-one within sight or sound to supervise.

Prices in the Shop should reflect the full market price to recover the initial cost of the items with perhaps a small profit at the discretion of the Shop Conveners. These are prices still well below what would be offered in gem and mineral shops doing business commercially and are for visitors to the Club, Open Days and the like. Members / Associates should be aware that as a *benefit* of membership, they are *entitled to sales at half the listed price*. This was agreed by the Committee - when Ray and Maureen reorganised prices on taking over during September / October; at the AGM when the Treasurer stated “consumables should be advertised as the price at purchase”; in the minutes of 21st January “Shop Report” and re-affirmed at the Committee meeting on Thurs 30th June. Stock has been repriced to reflect the decisions of the Committee last year. (Thanks to Maureen and Ray for doing this.). We are not a commercial organisation but neither can we afford to subsidise bargains for visitors!

Finally, thanks to Wendy Morley for offering to take on editorial duties in Scott’s absence and let us respect and thank all our members who give up their time to help the Club operate in the friendly manner which is appreciated and commented on by so many of our visitors.

CLUBROOM UPGRADES

Report by Ian Marshall

Following the acquisition of several mahogany drawers from the National Museum (thanks Ray), they have been built in, to improve the shop storage space in the office and then to organise the heaps of 'junk' underneath the working benches in the silver room.

Further developments in the silver room have increased the number of workstations, and kitted them out with a new apron, clamp & spotlight.

A squad of willing volunteers including (alphabetically) Alec, Biff, Donald, Ian, Jim, Peter, Rod and Scott, set to work on the 29th of December so that it would be ready for 2017.

Members can rent a drawer for a small fee per year.

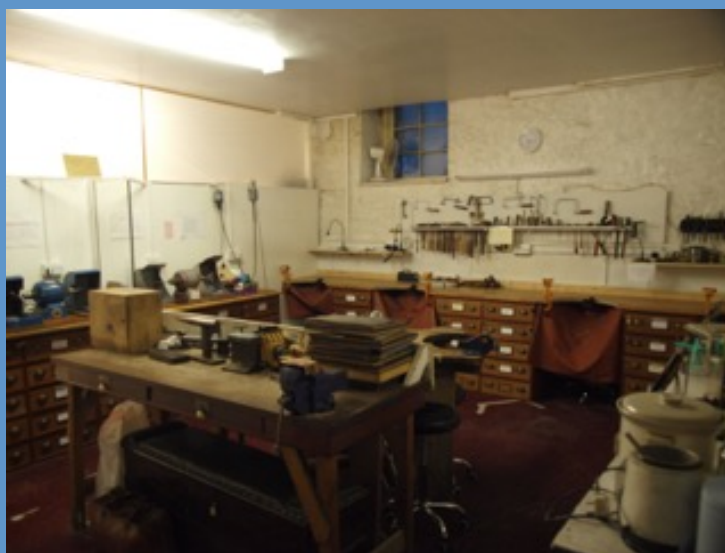
A set of tools are accessible from the board on the back wall. Finally, new stools were purchased for each work spot and subsequently for each position in the faceting room.

With the relocation of British Geological Survey from Murchison House to their new location (The Lyell Centre at Heriot-Watt campus at Riccarton) in February, Richard acquired a range of unwanted items: maps, field guides and books for the Club. Following this, Ian rescued items such as mobile library stools, BGS floor mats, curtains and rails, shelving, sets of display boards, posters, board maps / pictures etc, and finally eight cabinets with sliding glass doors.

The back room of the club's office has since been stripped of shelving, and the two filing cabinets repositioned to allow the new cabinets to be secured in position. These now hold our collections of Mineral & Gem magazines, details from the Agate Symposium & much of the Club's archive material.



BEFORE



AFTER

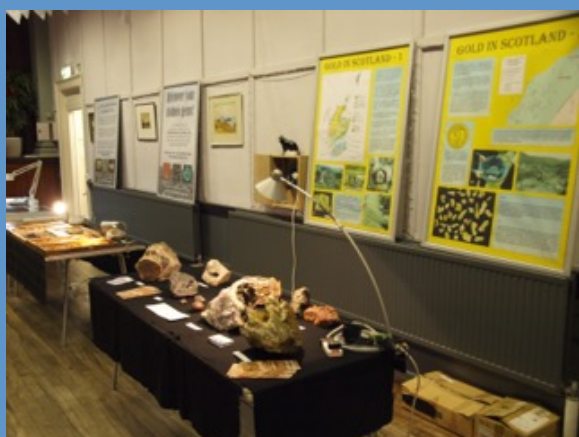
DISPLAYS & OUTREACH by Ian Marshall

CENTRAL LIBRARY



The central library on George IV Bridge hosted our main display of polished stones, minerals, silverwork & related literature with reference to Heddle, Hutton, John Muir & Alexander Begbie and the origins of our Club. This ran for 6 weeks in the New Year and was located in new (well lit) glass cases on the mezzanine floor of the Music Library. It was well received by visitors & the Library who are keen to host future displays.

MOFFAT TOWN HALL



In May, we were invited to take part in an advertising / information demonstration in Moffat Town Hall, prior to the Scottish / British Gold Panning Championships being held at Wanlockhead that weekend.

The World Championships are due to be held at Moffat in 2017.

The evening was well advertised in the local paper & on local radio. Despite this, the locals were decidedly absent - perhaps due to the heavy mist in the area (and all the way back to Edinburgh) but the Community

Council were very impressed by the work that can be done by our members, and Peter Dallas reported that the display was very well received by the Gold Panning members.

LEITH FESTIVAL

Another damp & chilly day dawned for the Gala on the Links, with the gazebo providing minimal shelter from the east wind, but fortunately the rain held off. A steady stream of visitors of all ages kept Tony & Ian busy all day. Many admired the trays of agates from Brazil, Australia and Worldwide asking if they were for sale - sorry, no - but the tumbled stones made into necklaces & bangles, and sample minerals were popular - with the first



visitor of the day (from Southampton) delighted with £10 worth of Christmas presents. In total £52.50 was realised.

In the course of the working week, a trickle of visitors appeared for most club sessions, some leaving contact details to become new members and all went away amazed at what they had seen and learned.

Again, thanks are due to members who took the time to show them around.

CLUB EVENTS

ROCK HUNTING TRIPS

This year Gareth Carnie organized several trips to farms in Fife, and due to a paucity of fields in suitable condition, additional interest was provided by David Andrews leading a trip to look for Jasper agates on the East Lothian coast (see article in this issue for more thoughts from David).

AUCTION

An auction of slabs, raw materials, and silverworking equipment took place earlier in the year, with Alex McReadie acting as auctioneer. The turnout was slightly disappointing (perhaps due to date changes), but those who came enjoyed the chance to bid for some unusual items.

Around £600 was raised for the club, and the unsold pieces are available in the clubroom shop.

DATES FOR YOUR DIARY

EDINBURGH OPEN DOORS

On **24th & 25th September 2016** the clubroom will be open to visitors as part of Edinburgh Doors Open event, organized by the Cockburn Association.

Their theme for this 26th year will be 'Innovation, Architecture & Design' but how we may fit in with this is open to suggestions!

All members are invited to help with showing people around the club, often an opportunity to encourage new members to join.

AT HOME

This year's "At Home" event occurs on the **5th & 6th November 2016**.

It is preceded by the 'cleaning week', when members refresh the clubrooms. We are encouraged to display & admire pieces made during the year - faceting, silver & polished stone. Friends & families are invited, the shop will be open for bargains and each afternoon finishes with a range of surprises from the Raffle!

DYNAMIC EARTH

18th - 21st October 2016

School Holiday Week. The Club have been invited back from Tuesday to Friday to display & demonstrate the various aspects of lapidary and geology to the many inquisitive youngsters & families.

CLUBROOM TALKS

27th October 2016

7:15pm for
7:30pm start.

"Dry Stone Walling in Scotland"

RICHARD LOVE,

Chairman SE Scotland
Dry Stone Walling
Association.

AGM

8th December 2016

7.30pm start,
in the clubrooms
(refreshments provided!)

WINTER SEASON CLUB TALKS 2016

Three entertaining talks took place over the winter, organized by Ian Marshall & Richard Gillanders:

- **Ian Marshall** “2 years to St Kilda”
- **Dr Hermione Cockburn** (Dynamic Earth) “James Hutton and Edinburgh’s Inspirational Landscape” (summary below)
- **Hamish Johnston** “The Life & Works of Matthew Forster Heddle”

Talk given by Hermione Cockburn, on 24th March 2016.
‘James Hutton and Edinburgh’s Inspirational Landscape’
Report by Richard Gillanders

We were privileged to have Hermione Cockburn give a talk to the Club. Hermione is an earth scientist, television and radio presenter, and author and is currently Scientific Director at Our Dynamic Earth.



(photo by Vera de Kok)

Dynamic Earth, opened in 1999, was built as a celebration of the life of James Hutton (1726-1797), ‘the Father of Modern Geology’ who studied and worked in this area of Edinburgh throughout the Enlightenment period.



James Hutton (1726-1797)
By Sir Henry Raeburn
Held in the National
Gallery of Scotland

Hutton’s Theory of the Earth was presented to the Royal Society of Edinburgh in 1785 and published in 1788, incorporating evidence from the Edinburgh area in support of his theory.

Hutton was the first to realise the significance of the rock structure known as an *unconformity*, at Siccar Point on the Berwickshire coast when he visited by boat in 1788.

Here, nearly horizontal Devonian age sedimentary strata lie on the vertical strata of the much older Silurian rocks.

of rocks, that this represented an enormous interval of time during which the older rocks were uplifted to form land, and then submerged below the sea for later sediments to be deposited on the older rocks.

Hutton inferred from the sharp junction between the two sets



(photo by Dave Sousa)

Dynamic Earth is overlooked by Salisbury Crags. Here Hutton demonstrated (at the part of the crags later known as 'Hutton's Section') that the rock of the crags was once molten rock and had heated the sedimentary rocks below. Professor Robert Jameson at the University was a follower of the German geologist Werner, a 'Neptunist' who believed all rocks were deposited in a primeval ocean without the process of heat.

Hermione showed us a clip from the television series 'Coast'. In addition she has presented various BBC television series including '[What the Ancients Did For Us](#)', '[Rough Science](#)', '[The Nature of Britain](#)', '[Midsummer Live](#)', and '[Fossil Detective's](#)'. Her favourite moment from working in broadcasting was interviewing Sir David Attenborough about his life-long love of fossils.

Hermione went on to relate the history of Dynamic Earth from its founding in 1999. It is situated on the grounds of an old brewery bottling plant and was the catalyst for the economic regeneration of the Holyrood area.

A really excellent talk, which was much appreciated.

TRAINING

A small team of instructors have given a lot of their free time to run courses for trainees (from as far afield as Shetland and Nigeria) since the start of the year. The instructors' dedication is to be applauded, as many trainees have been regular attenders and now full members of the Club. Congratulations to all on completing the course and welcome to the Club. The next intake for July is full and the October course filling up fast!



FEBRUARY: Ian Brown, Carmen Garcia-Carbiido, Peter Scott-Wilson, Scott Fairbairn, Rotimi Ogundele.



JANUARY: Morag McRostie, Nicola Cavallari and Elena Muscardini, Mary Bownes, Gale Waters, Kathryn McClure. Also, not pictured were Craig Young & his son Aidan (Junior Member).



APRIL: Lisadora Mason-Chadburn, Metlah Brown, Wilma McPherson, Iluta Leimane, Mike Finnie.

JASPER AND AGATE FROM THE EAST LoTHIAN COAST

By David Andrews

As you may know I have been collecting jasper and agate over the past 5 years near Dunbar. I first became aware of the existence of these interesting rocks having read the book *Agates* by McPherson, who mentioned the white skin that formed on the moss agates in this area. It appears that the area is mostly ignored in comparison to the more productive East coast sites. In this article I hope to share my thoughts on why there is a concentration of jasper and agate on the beaches of East Lothian, and how these different varieties were formed.



A selection of mostly
East Lothian jaspagate



Petrified wood pebble

The ten miles of coast between Dunbar and Cove presents a wide variety of geological events exposed by coastal and glacial erosion. Dunbar sits at the eastern end of the Southern Upland fault and has a rich variety of geology exposed on the coastline. The Old Red Sandstone outcrops and basalt columns in Dunbar harbour lead to the commercially rich limestone at Whitesands, then onto greywacke and mudstone overlaid by sandstone cliffs, cut by deep glacial meltwater channels which terminate at Thornton, Bilsdean and Dunglass. It is not surprising then that in an area rich in silica from rock alteration, the extraction from living organisms that form limestone and the minerals leached from volcanic activity create an environment for the formation of flint, chert, jasper and agate.



Yellow jasper reformed with agate

The key elements in the formation of jasper and agate are silica and the minerals released by volcanic activity. As we know silica can be created commercially as a drying agent from sodium silicate to form a hardened gel. The theory is the same in nature. Initially the gel is fluid similar to bechamel sauce, which as it dehydrates transforms to a gelatine type Sol. Opal is a hardened gel which as it dehydrates turns to jasper. Jasper can be formed in four different processes; organic (sedimentary), chemical (precipitation), fossilisation (silification of fossils) and volcanic (silification of volcanic rock). Agate is of course formed in voids; either vesicule or seam.

My understanding is that the formation of jaspers can be either by organic sediment or by volcanic events. The jasper formed in sedimentary limestone is free from iron, so there will be little colour, as seen in flint and chert. However, if this sits on top of volcanic rocks the iron minerals will create the red and yellow colour through oxidisation. Many basic jaspers have visible iron content in the form of granular or solid hematite. Volcanic jasper is the result of silica being released by volcanic activity. For example, Obsidian contains 80% silica, forming a rhyolitic volcanic glass. Beds of rhyolitic ash will form stratified jasper, and the silica in pyroclastic flow that fells trees and animals in its path can result in the fossil jaspers. If the volcanic activity is under water, fumeroles will form blocky jasper. Jasper agate is formed as a secondary chemical process, often reforming in a silica gel, in cavities or the brecciation of existing jasper.



Moss agate, red jasper



Yellow jasper with hematite,



Quartzzy Jaspagate (bears head)

When I first started looking at the rocks on the beaches around Dunbar I was looking for banded agate. Then I started finding boulder size jaspers that were yellow and red banded and a mix in between. These had high iron content, often granular, and were not great to work with. Then on closer inspection, smaller pebbles could be found with a mottled white skin that looked like flints, but were very different inside the weathered skin. These turned out to be moss agate and took an excellent polish. Since these first finds I have collected a wide variety of Jaspagate ranging from moss, banded and plume, to petrified wood, fossil bone and agatised coral. The main indicator in the finds is colour, fracture and the waxy appearance of the skin. Also as the more interesting examples are formed near the frothy surface of molten rock, the slaggy appearance and quartz voids of irregular sized pebbles can often yield some of the best examples.



Petrified wood cut pebble



Moss in Flint nodule

I have found that the hotspots are near the termination of the old meltwater channels, and also where the storm beaches are most affected by wave action. This suggests that the variety and source of the finds are from both glacial erosion and off shore beds. It may also be possible that these harder rocks are being released from weathered conglomerate, perhaps in more than one sequence.



Detail of multicoloured jaspagate 6cm



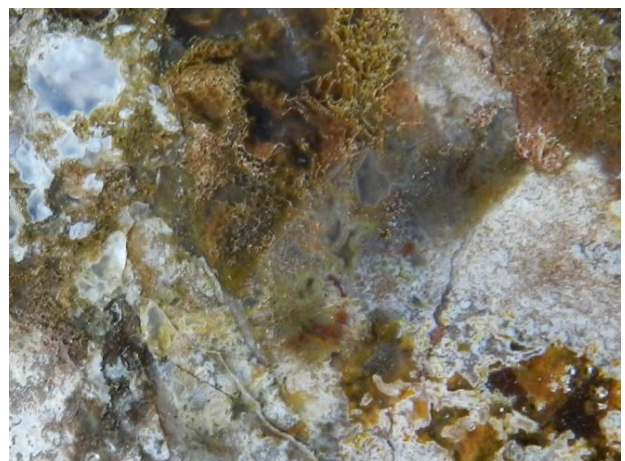
Detail of complex jaspagate 4cm

Most of the finds are weathered and tumbled, but occasionally there are fresh blocks of jasper, suggesting that these are being released by wave action and from the shifting sands that are prone to wind, tide and coastal drift. If you are lucky to find small agate nodules these are likely to be a lemon yellow. Flint is also found, and often has colouration which suggests the influence of local volcanic alteration. With the wide range of rocks on the storm beaches, and the constant shifting of the pebbles, this area always has the potential of offering easy access to year round finds that will be well worth your lapidary efforts.

As you may know, professional geologists are very reluctant to make the assumptions that I have without a great deal more research. However, I hope that those who know more than I do will contribute their alternative theories in future editions so that we can all recognise the environments that will result in profitable trips in the future. Like most of us, I have an enquiring mind, but at the end of the day, I'm just having fun sharing my enthusiasm and walking the local beaches finding different attractive stones to cut and polish.



Plume agate detail 6cm



White moss agate detail 4cm

LAPIZ

The club was approached by Graciela Ainsworth to assist with the restoration of a stately home's fireplace, which had a strip of lapis lazuli creating a border. Several members including Alex McCreddie, Ian Barnett, and Peter Dallas created replacement pieces for missing and damaged parts, which fitted very well into the original. This was an interesting & unusual project, and a donation was made to club funds.

MEMBER'S NEWS by Ian Marshall

2016 did not start favourably, with the passing of four former members.

ENA MARR - 7th Jan. Ena was wife & long time partner of Johnny Marr, ever since the incident with the 'puncture' when out cycling. An associate member, she worked as a secretary. On retirement, they enjoyed many trips abroad (e.g. to Russia), which were recanted to members in jovial fashion by Johnny following their return.

JOAN McLEAN – 17th Jan. Alistair Tait recalls that she was "an active agate and mineral collector and member of our Club". She also had strong links to the Fleet Air Arm and her funeral reflected this aspect of her life.

AILEEN MOYES - 2nd April. A long time member and past chairman, Aileen retired as head of Flora Stevenson Primary to indulge in her passion for world travelling, often with Hilary Clark. Tales and photos of her experiences were given at Club talks and were much appreciated by members. Passionate about classical music, ornamental bears and "toddy tart", her love of Scotland saw her immediate family all wearing the MacKay tartan as she left to the bagpipe tune, the "Black Bear" - the rousing tune played at the end of each Tattoo performance.

BOB WARD - 18th April. A former member also remembered by others in the Club.

All services were attended by various Club members and our condolences go to their respective families.

JOYCE ARMSTRONG has been unwell, and we all send best wishes for continued improvement.

SCOTT PORTER has been recovering well, and we wish him & Sarah a speedy return to normality.

Congratulations to BILL WILSON who reached his 90th birthday in May. He was delighted with his surprise birthday cake and card.

Not far behind, REG LACON celebrated his 88th year during the same month.



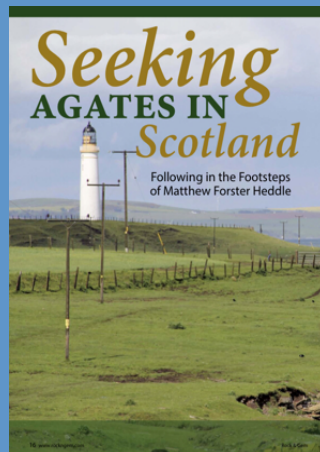
VISITORS TO THE CLUB



Jim & Nancy Brace-Thompson from the Ventura Club, visited the club as part of a trip to Scotland.

You can read more about this in Jim's articles in the April 2016 edition of Rock & Gem magazine – available in the clubrooms.

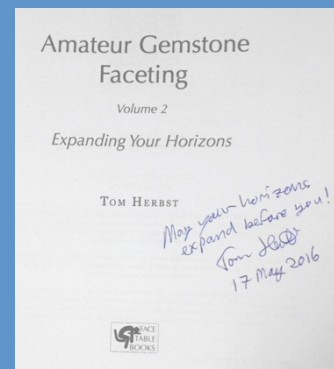
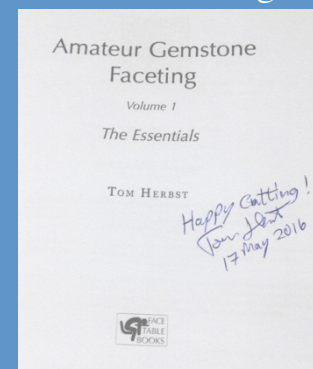
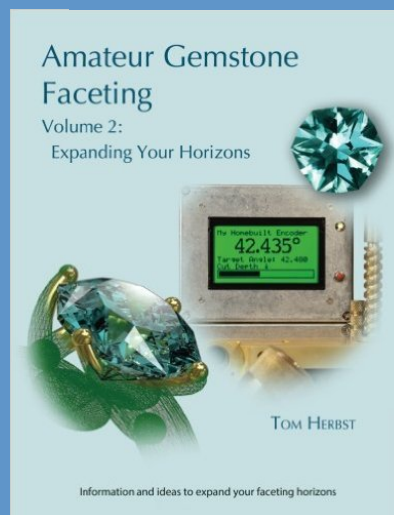
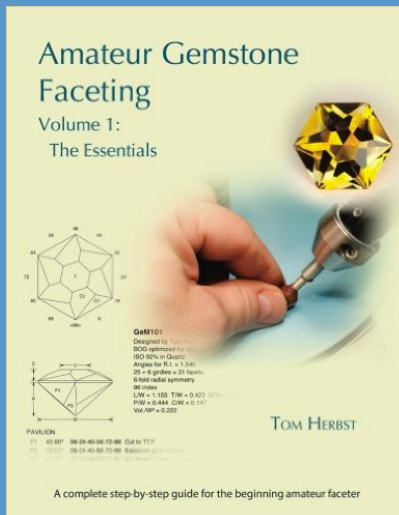
(Articles on Page 1 and Page 24).



Agates, jaspers and mineral specimens from Western USA donated to the Club, are on display in the mineral room of our club (in the vertical cabinet nearest the 'emergency - exit' door).



Facetor Tom Herbst from Heidelberg enjoyed visiting the club in May. He is the author of two volumes on *Amateur Gemstone Faceting*, and was kind enough to autograph the SMLC copies (held in the reference section of the clubroom library).



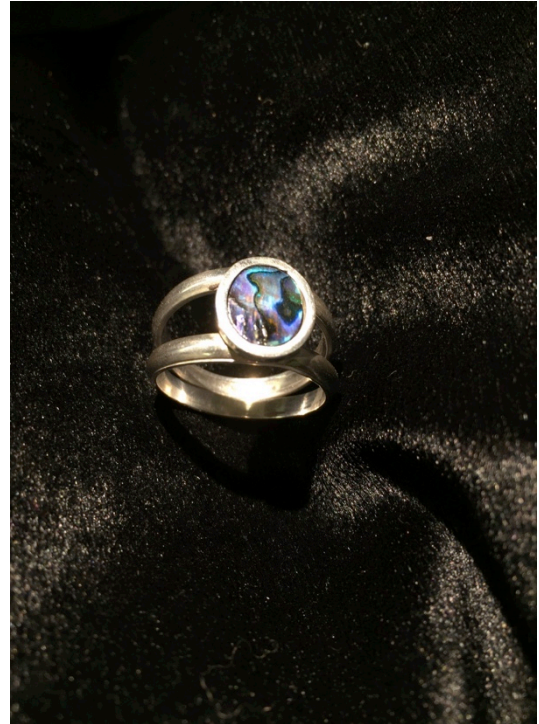
A SHOWCASE OF MEMBERS' WORK

A straightforward technique for creating a pendant was passed on from Peter Dallas to Craig McCarry, who used it to display his polished tiger-iron.



A groove is cut around the edges of the stone using the trim saw, which allows silver wire to be bent around the edges, slotting into the groove, and twisted together at the top to create a bail.

Peter Dallas created this ring using Abalone shell set into two silver bands, soldered together for strength. He has donated it to the club for display.



We'd appreciate more completed pieces for display in the clubrooms. If you'd like to create a donation, the silver for the piece can be provided by the club.



← John Priestley used twisted *round* silver wire to create a lovely pendant, showcasing this unusual feathered agate.

→ This time *square* silver wire was twisted, creating a more distinctive pattern, setting off the serpentine heart pendant effectively.



This beautiful bracelet was a labour of love for Emma Hollands, who created individual settings for each agate. She made the clasp by doming 2 pieces of sheet silver, then soldering on a flat back – one had a slit in, the other a “key” which had been set into a smaller slot for stability then soldered into position.



The clasp is very satisfying to fasten, and feels secure.

The finished piece is stunning.

Wendy Morley was looking for a way to display and use tumbled stones, and created this coaster using a silicone mould, and Epoxy enamel resin (which comes in two bottles – equal parts of resin & hardener are mixed together and allowed to harden).

The coasters were created upside down with the first layer of resin allowed to semi-harden so the stones could be positioned more easily on top, then a second layer of the resin was poured over, before 48 hours of drying, then unmoulding.



- Silicomart Silicon Sponge Base Mould
- Environmental Castin' Craft Easycast Clear Casting Epoxy
- Both available on [Amazon.co.uk](https://www.amazon.co.uk)