



TAURANGA GEM & MINERAL CLUB INC

P.O. BOX 841 TAURANGA 3144

GEMZONE

February 2021

VILLAGE GEMS

**TAURANGA GEM & MINERAL CLUB Inc.
HISTORIC VILLAGE
17TH AVE TAURANGA**

**POLISHED STONES - CLOCKS – GREENSTONE PENDANTS - MINERALS
NOVELTIES - KAURI GUM - JEWELLERY - POLISHED FACES
MUSEUM & FLUORESCENT DISPLAY**

Rotorua Lapidary



WE HAVE BEEN SERVING NEW ZEALAND SINCE 1981

STOCKISTS OF:

- Tumbling Machines for Stone, Glass & Shell
- Rock Cutting, Polishing & Carving Machines
- Grinding & Polishing Media for Stone, Glass, Shell, Bone and Metal
- Crystals, Minerals & Rough Rock
- Polished Stones
- Fossils
- Gemstone Beads & Metal Clasps & Fittings
- Greenstone & Jade Carvings

SERVICES:

- Stone Cutting, Polishing & Drilling
- Jewellery Repairs & Bead Threading
- Stone Bead Necklace & Earring Making

**HOURS: Monday – Friday 9.30am to 5pm
Saturday 10am – 2pm**

Rotorua Lapidary Rock & Mineral Supplies Ltd
1120 Eruera Street, Rotorua 3010
Postal Address: P O Box 569, Rotorua 3040

Ph: 07 348 8996 Fax 07 348 8621

rotorualapidary@xtra.co.nz
www.rotorualapidary.co.nz

Colin & Bev Simmons

February Club Events

Workshop

February 2021: Tuesday workshop nights resume from 6pm to 7-30pm.

Use of the workshop during shop hours:

\$2 per hour

Please pay at the counter

Club Night

Monday 8 February at the Club rooms

Juniors from 6 pm – 7.30pm: Make Fossils with Olga and Bryce and workshop activities.

Seniors at 7.30pm: Make Fossils. Workshop.

Stone of the Month: Holiday finds and Fossils.



Committee

Wednesday 17 February 7.30 pm.

Meet at the clubrooms.

Field Trip

Sunday 28 February: Meet in Paeroa at 9.30am outside McDonalds.

We will be looking for amethyst and pseudomorph (a crystal consisting of one mineral but having the form of another). Bring a pick to sort through the piles of loose rock.

This trip will be led by Graeme Dewhurst and is suitable for Juniors, enquiries Ph: 07 576 7874.

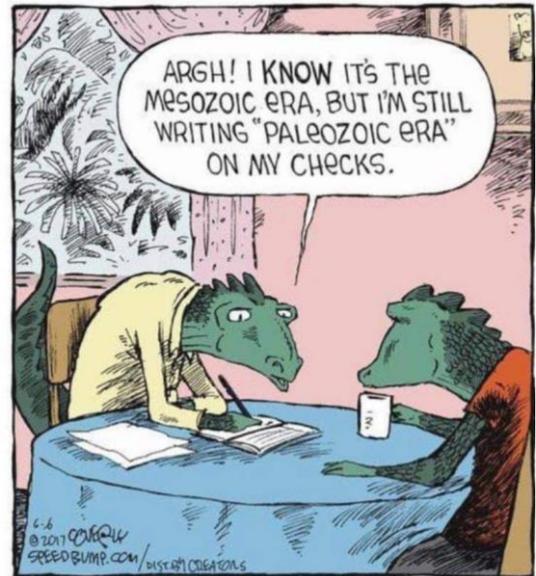
Field Trip cancellations: TGMC takes the safety of its members seriously and has the right to cancel field trips in the event of severe weather warnings or other factors that prevent any trip from taking place. News about changes, postponements or cancellations to a proposed field trip will be advised via email and posted on the Facebook page as soon as possible.

Collection Viewing Night

Wednesday 24 February at 7.30pm

Meet at the home of Ian and Laverne Mason, 4 Valley View Road, Lower Kaimai. Ph: 543 4951.

Please bring a plate to share for supper and any rocks or fossils for identification or discussion.



Club notices

Subscriptions are due:

Please pay your subs before 31st March 2021. Tauranga Gem & Mineral Club's financial year ends on 31st December.

COMMITTEE VACANCIES:

We need a Secretary and a Membership Secretary (see details on the next page). Other positions include Newsletter Editor and Treasurer. If you want to find out more about the rock hounding hobby, joining the committee is a good place to start. The AGM is coming up in March when new officers are elected.

TGMC Committee Members 2020 and other Club Officers		
President	Graeme Dewhurst	576 7874
Vice President	Carla van den Hout	552 5175
Treasurer	Naera Wilton	07 864876
Secretary Club Email	Carol Cunningham sec.tgmc@hotmail.com	578 1639
Membership		
Publicity	Bryce Cooper	027 6950606
Shop	Carla van den Hout	552 5175
Shop supplies	Olga Nicholson Bryce Cooper	575 2070
Field trips	Graham Hill	552 4496
Field trip assist.	Charlie Harris	021 0409332
Workshop	Bryce Cooper Raymond Schroder	576 3027
Museum display	Margaret Parker	576 2660
Facebook admin	Ian Mason Kristy Pawson	543 4951
Newsletter advertising	Steve Raynor	282 8126
Patron	Roger Eade	576 0117
Newsletter	Sue Millman	544 4878
Library/Museum	Marcel Authier John Clark	572 3034 022 0206812
Maintenance	Bryce Cooper	
Microscopes		
Silent Auction	Ian Mason	543 4951

New Zealand Events

20-21 March: Whangarei Rock & Gem Club, Vintage Car Clubrooms, Kiwi North Gate 2, SHW 14 Maunu, Whangarei

30 April – 2 May: Tauranga Gem & Mineral Club Show, Tauranga Racecourse, 1383 Cameron Road, Greerton.

15-16 May: Northshore Rockhounds Club Mini Show, Milford Senior Citizens Hall, Kitchener Road, Milford

National Show: 15-17 October, Mineral Club of Hutt Valley & Wellington, Lower Hutt

2022 – National Show. To be hosted by the Canterbury Mineral & Lapidary Club.

Australian events

2-5 April, 2021, Gemboree, Tasmania

15 -19 April 2022 Gemboree Mudgee, NSW

Our Club needs the following Administrators

Do you have some time to spare, and basic computer skills?

SECRETARY

You are needed to:

Take the minutes at our Monthly Committee meeting every 3rd Wednesday at 7.30pm

Email minutes to Committee members

Manage our Email account

Forward other club's magazines to our members who want them.

Deal with requests from the public and members.

MEMBERSHIP SECRETARY

Collect Subscription forms as they come in from shop and by email.

Enter in Membership Book at the Club

Enter on Computer List of Members 2021 and print to keep up to date on notice board.

Enter on the email site.

Send Welcome letter to new members and attach the current Newsletter.

Please get in touch if you can give us some help.

WHANGAREI ROCK & GEMSTONE CLUB INC
Presents...



Rocks·Reveal·Their·Secrets

Calcite crystals
M Singleton C Davies



- Jewellers
- Gemstones
- Minerals
- Fossils
- Fluorescent display
- Microscope displays
- Childrens' activities
- Trading tables

Featuring fossils, polished rocks, minerals, demonstrations, and educational displays
Rock cutting and identification
Special activities for children
Refreshments available

Vintage Car Club Rooms, KiwiNorth
Gate 2, SHW 14, Maunu, Whangarei
 Sat 20th March from 9-5, Sun 21st from 9-4
Admission: \$2 Adults · \$1 Children · \$5 Family

THE 2021 NATIONAL ROCK & MINERAL SHOW

Discover the exciting and colourful world of
Gems, Crystals, Minerals, Rocks and Fossils



· Bring your Rocks and Fossils for expert identification · Dramatic displays
 · Fun and interest for all the family · Sales tables, Jewellery, Rock art, Exotic Specimens

Expressions Whirinaki Arts and Entertainment Centre / 835 Ferguson Drive / Upper Hutt City
 Friday 15 Oct. - Sunday 17 Oct. 2021 / 9am - 5pm Friday and Saturday / 9am - 4pm Sunday

Proudly hosted by the Mineral Club of Hutt Valley & Wellington Inc

Subscriptions for 2020 are now due

Subs can be paid to Westpac Bank a/c No: 030435 0467603 00 Use your name as reference.

If you wish to pay by Internet banking please email the following details to: sec.tgmc@hotmail.com

Surname:.....

Christian Name:.....

Other names for family membership:.....

Address:.....

Post Code:.....

Phone: Home:.....

Work:.....

Mobile:.....

Email:.....

I wish to receive my newsletter by email:

or pick up from the clubrooms

or posted out (\$12 extra)

Financial year is from 1st January to 31st Dec. Subs are due for payment by 31st March when all privileges, including the Newsletter, will lapse.

Subs: Family \$35 Individual \$25

(Note: For printed newsletters there is an extra \$12 charge to cover postage and printing costs, otherwise collect your named copy from the club rooms)

Kaingaroo Forest Māori rock carvings (July Field trip 26.07.20)

Ilmars Gravis

On a field trip last year to collect sulphur from Kaingaroo Forest, a visit was also made to the site of Pre-European rock carvings, relatively rare in the North Island, compared to the South Island. Despite their significance, the cave shelter and carvings are poorly signposted, but they can be accessed by a short well-formed path from the highway shoulder and through the bush.

Overall Māori rock carvings are not unusual; however, the majority are found in the South Island. Additionally, credible recent research is still patchy with a basic literature search turning up only a few frequently cited pieces. I was fortunate to find a copy of the book published in 1971 “Prehistoric Rock Art of New Zealand” by Michael Trotter and Beverly McCulloch. Despite publication in 1971, it still appears to be one of the few, if not the only book specifically covering the topic. Nonetheless I would still recommend it as an interesting and useful read.

The cave shelter and rock carvings at Kaingaroo were first brought to the attention of Europeans when Forestry Department workers were burning off an area near Murupara in preparation for planting in 1925. The find was reported to the Department and in time it was examined by A. Hamilton from the Dominion Museum. As noted by Hamilton at the end of his notes, the site was then “securely fenced” and otherwise protected, and from then on specific permission was required to access the carvings. Follow this link to his original article with notes and pictures, and a description of the site at the time. <https://tinyurl.com/yxt8tyyx>

Since then, the site has remained largely unchanged except for the ongoing effects of weathering and surface vegetation. The shelter is formed by an overhang in a bluff of Kaingaroo Formation welded ignimbrite erupted from the Reparoa Volcanic Centre approximately 230,000 years ago. It is possible the bluff is the result of a fault, or erosion by running water long-since dried up. In this region ignimbrite may be up to tens of metres thick, and outcrops typically form steep faced massive bluffs with distinctive vertical and horizontal jointing patterns.



Left: Typical erosional and weathering features in welded ignimbrite, providing a well utilised niche for colonising vegetation.



Right: Overhang of volcanic ignimbrite showing colonisation by lichen and ferns. Clearly visible below is the cage protecting the shelter and rock carvings.

The ignimbrite in this area is described as “tens of metres thick, characterised by a crystal-poor (<4%) matrix, poor in pumice clasts, variably to highly welded, and vapour-phased altered near the top” (Geology of the Rotorua Area; 1:250 000 Geological Map). While there is no longer running water in the immediate area, it is highly likely that forestry activities would have significantly altered the hydrology of the area from what it would have been during the height of Māori activity.

Since their “discovery”, research on the site has spanned a continuum from well-reasoned scientific and archaeological research to downright speculation to support pre-existing theories and assumptions. The website for Haka Tours NZ (<https://hakatours.com/destinations/murupara>) states the carvings as carbon dated to 1050 AD; however I have yet been unable to verify the source for this. This would place them during the earliest period of human settlement of the country in line with other rock carvings in the country. One of the most common features in the series of carving are waka and the absence of significant water bodies in the area has been noted and led to the theory that the carvings are a reference to “the great migration”. It is also possible the shelter was a stop on a portage route between rivers and/or lakes, especially given that single hulled waka were an important form of transport.



Left: Area of carvings showing the main design features, waka-like shapes and zig-zag patterns.



Right: Detail of waka shape with spiral infilling. Not all waka feature spirals.

Early discussion of the carvings noted the lack of knowledge of the carvings amongst locals, leading to suggestions they had been “forgotten” by local *iwi* or *hapu*. However, given the probable relationships between researchers and local *hapu* during the early 20th century I would consider it quite likely that there could have been a reluctance to promote the locality of *tapu* sites in the area, especially when one considers the changes that would have been taking place to the landscape around a people dispossessed and disconnected from that landscape by ongoing colonial activities on an industrial scale.

In closing I would like to recommend a piece I am sharing here with permission of the author, Wayne Rameka Te Mauparaoa Roberts, providing a valuable history of Māori settlement and habitation of the area, interaction with local and regional resources, their place in the surrounding landscape, and the importance of the carvings as a *taonga* to the local *hapu* and the wider *iwi*. The piece can be accessed at this link <https://tinyurl.com/yysx3rpg> I highly recommend this piece and considering the questions it raises.

Thanks to Charlie Harris for organising the visit to the site; I would like to acknowledge Ngāti Manawa, and those who ensured this site was protected on rediscovery and remains accessible to the public.

⇒ Approximate GPS co-ordinates for the site are -38.448306 176.589694, with the path entrance off state highway 38 between Murupara and Waimangu.

Stibnite and Antimony

Stibnite, sometimes called **antimonite**, is a sulphide mineral. This soft grey material crystallizes in an orthorhombic space group, has a metallic lustre and sits at 2 on the Mohs hardness scale. While Stibnite is grey when fresh, it can turn superficially black due to oxidation in air. It is the most important source for the metalloid antimony. Antimony rarely occurs in nature as a native element, but is found in a number of different minerals, the most important of which is stibnite (SbS₃). Antimony is often called a semi-metal, because in pure form it is not shiny and malleable like true metals. It easily combines with other elements, usually including sulphur, to form over 100 different minerals. Of these minerals, only stibnite is mined commercially as a source for metallic antimony. Eighty percent of the world's antimony is produced from two types of deposits - carbonate replacement deposits and gold-antimony epithermal deposits.

Uses: Antimony is used principally for flame retardants as well as in ammunition and automotive batteries and as a decolourizing agent in glassmaking. One use of antimony, which is declining, is to make type metal for printing newspapers and magazines. Antimony is one of very few substances (bismuth and water are two others) which expands when it cools and freezes. Antimony-bearing type metal thus fills every corner of a mould used to prepare sharp type for printing. With the advent of computer printing, this use has greatly decreased.

Antimony is also alloyed with tin to make pewter items such as plates, pitchers and cups, used mostly for decoration. Antimony is also used for pigments in plastics, paints, rubber, and for a wide variety of minor uses, including medicines, fireworks, and others. Antimony oxide is a brilliant yellow colour, accounting for much of the pigment use. A tiny amount of highly purified antimony metal is used in the computer industry to make semiconductors. To be useful in this application, antimony has to be 99.999% pure!

Antimony minerals, particularly stibnite, have been known and used since ancient times. Because it is so soft, stibnite was used in ancient times as black eye makeup. The Roman historian, Pliny, wrote about its use as a medicine. Artists used finely-ground stibnite in the Middle Ages as a black pigment. Ancient "scientists" were interested in antimony because of their belief that it may be useful in the process of changing common metals into gold. This field was known as alchemy. Nowadays Antimony is increasingly viewed as being a toxic element, and considerably more care is taken when handling it. For example, recommended drinking water limits for antimony are very low, even lower than for arsenic.



H																	He
Li	Be											B	C	N	O	F	Ne
Na	Mg											Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	Ac															

arsenic (As)

antimony (Sb)

Figure 1. Periodic Table showing the positions of arsenic (As) and antimony (Sb) in the same column.

Antimony (Sb) is a metallic element (actually a metalloid) like arsenic. Antimony sits immediately below arsenic in the periodic table, and has many of the same chemical properties. In particular antimony readily forms complex negatively charged ions with oxygen (oxyanions) in the environment. Antimony can be in the 3+ or 5+ oxidation state in these oxyanions, just like arsenic. As for arsenic, the 5+ oxidation state is the most common in the environment.

<https://www.otago.ac.nz/geology/research/environmental-geology/metals-in-the-nz-environment/antimony.html>

<https://scienceviews.com/geology/antimony.html>

<https://en.wikipedia.org/wiki/Stibnite>



Above: Early 20th Century Antimony box from Japan



The TGMC team at Retaruke for the summer field trip.

WANTED TO BUY

Wanted to buy:

Collections of Minerals, Crystals and polished faces. Large or small, part or all.
Contact Greg 575 3851.

Wanted to buy:

Bob Vear is looking for NZ Fossils Ammonites and Trilobites or any interesting fossils. Location identified preferably. Contact Bob (07) 543 0660.

Wanted: Please drop off any surplus egg cartons at the shop for Ian Mason.

Wanted to buy:

Gold, silver, any old or unwanted jewellery made of gold or silver for scrap. Top scrap prices paid. Contact Graeme on 07 577 1979 or 027 4496 960; email carver.petersen@xtra.co.nz



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Facebook groups to follow

Tauranga Gem & Mineral Club



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Minerals, Fossils



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TAURANGA	cnr elizabeth & glasgow sts (OPEN 7 DAYS)
MOUNT	37 hewletts road. (beside the flyover)
GREERTON	1231 cameron rd (next to super liquor)
FRASER COVE	corner of fraser & brook streets
OTUMOETA	95 ngatai road (near the otumoetai golf club)

