

# THE CMLC NEWS

The Canterbury Mineral & Lapidary Club Inc.  
Newsletter for September 2022



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**Website:** [www.cmlclub.org.nz](http://www.cmlclub.org.nz)  
**Facebook:** Canterbury Mineral and Lapidary Club  
**Meeting Venue & Clubrooms:** 110 Waltham Road, Waltham, Christchurch 7:30 pm on the second Thursday of the month [Feb. to Nov.]

General Meeting (7.30pm ): October 14, November 10  
Committee Meeting (7.30 pm): October 20, November 17  
Micro Mineral Meeting: Tuesday evenings (7 pm)  
Workshops: Every Tuesday evenings, 6.30 p.m.

**The October Meeting: Please note: Our meeting is on the Friday evening, 14 October at the clubrooms, with guest speakers, Hans Schumann and Jorgen Hansen.**

**Kitchen Duty for the October Meeting:** Daniel Cordes, Lindsay Day, Denise Devine, Alexandrah Du Barry, John Dugmore, Sharlene Lee, Wayne Eddy, Logan Flanagan, Pete Gibbs, Amanda Gray. Please put out the cups at the beginning of the meeting and clear away dishes and tidy the kitchen at the end of the evening.

**Field Trips:** The field trip on Friday 14 October leaves Riccarton Park (Outside the show building) at 10 am for Leithfield Beach, meeting at Pukeko Junction. This trip is led by Joanne Walton. Field trips on the Saturday and Sunday of the show will be to Whitecliffs, initially for visiting members from other clubs. The Sunday trip will be shortened, leaving the dig at 2 pm to be back at Riccarton Park for pack-up at 4 pm.

## The September Monthly Competitions Results

### Lapidary: Polished lapidary work containing the colour blue

1<sup>st</sup> Nate Van Holt, 2<sup>nd</sup> equal C. McGregor and J Taylor, 3<sup>rd</sup> equal L.Day and Ava

4<sup>th</sup> Equal Zena , R. Clarke, R poskitt

### Fossil Fossil wood (NZ)

1<sup>st</sup> Equal C. McGregor, M. Wuum 2<sup>nd</sup> J. Taylor 3<sup>rd</sup> V. Lear

4<sup>th</sup> Equal L.Day, R.Clarke, R.Poskitt, Zena.

### Mineral: Mineral from Nelson region.

1<sup>st</sup> D. Macdonald, 2<sup>nd</sup> J.Taylor, 3<sup>rd</sup> C.McGregor

4<sup>th</sup> equal V.Lear, Heather Hall, Ava, Zena.

### Alphabet Cup: CXM

1<sup>st</sup> equal J. Taylor and Ava, 2<sup>nd</sup> C.McGregor, 3<sup>rd</sup> V.Lear

4<sup>th</sup> equal L.Day, R.Clarke, R. Poskitt

### Novice Section Any rock you wish to enter

1<sup>st</sup> equal R.poskitt, Colleen H, 2<sup>nd</sup> Zena, 3<sup>rd</sup> Equal Ava and Rosalie

4<sup>th</sup> Heather Hall

### Bring and Brag

1<sup>st</sup> Equal Nate Van Holt –Petrified Forrest floor, L.Day -Picture Rock.

2<sup>nd</sup> C. McGregor –Fossil wood replaced by Hematite

3<sup>rd</sup> Don McLauchlan –Fossil Wood.

## The October Monthly Competitions

Lapidary: Polished lapidary work containing the colour red.

Fossil: Fossil Leaves (NZ)

Mineral : Mineral from Canterbury

Alphabet: Any specimen from a country or state starting with D, W or N.

Novice Section: Any rock you wish to enter (Anyone who has been in the club less than 2 years)

Bring and Brag: Be prepared to talk about it.





## **The National Show and Competitions (14-16 October at Riccarton Park):**

**A big thank you to everyone who has volunteered to help with this fantastic event. A club email will be sent out soon listing the personnel and jobs that need doing. If you see a gap, please help out. We would like lots of our club members wandering around the displays and competitions area. Orange vests will be available at the check-in desk to make you very visible and giving added security.**

### **Show Timetable**

**Wednesday 12 October:** 1.30 pm: CMLC members meet at clubrooms to transport show materials and cases to Riccarton Park

**Thursday 13 October:** 8.30 am. Show setup (All volunteer help most welcome)

1.00 pm: Show cases and sales tables may be set up

6 pm: Rooms closed for competitions judging.

**Friday 14 October:** 9 am Show opens to the public

10 am Field trip departure from Riccarton Park.

5 pm: Show closes

7.30 pm Guest speakers, Hans Schumann (Bielefeld, Germany) and Jorgen Hansen (Jutland, Denmark) at the CMLC Clubrooms, 110 Waltham Rd.

**Saturday 15 October:** 9 am Show opens to the public

Time and place yet to be decided: Field trip departs Riccarton Park

5 pm Show closes

6.30 pm: Meet for drinks etc, Show dinner at 7 pm at Riccarton Park.

**Sunday 16 October:** 9 am Show opens to the public

10am: National Association AGM at Riccarton Park

4 pm Show closes to the public

**4.15 pm: Show breakdown commences (All volunteer help welcome)**  
**All our club materials will then be loaded into a truck and transported back to our clubrooms and stored. This is a change from what was previously advised. The breakdown can be done very quickly—competitors and displays escorted back into the room to remove their entries/displays; tables folded and stacked near the entry; show cases folded flat and moved into the truck; road signs and other club material moved into the truck. . If everyone helps, it will not take more than a couple of hours.**

**New Member:** Please make welcome, Alison Morgan, Danielle Salvestro, Genevieve Early, Sharon Cross.

**Raffles Wanted:** Donations for our monthly meeting door raffles would be gratefully received.

**Scientists devise method to combat climate change using common NZ rock: Will Harvie; Stuff, Feb 15 2021.**

New Zealand academics have figured out a way to sequester massive amounts of carbon dioxide using a common rock.

Sequestering is a method of capturing a material, in this case the climate change gas carbon dioxide, with another material from which it cannot escape.

So far, they've sequestered only a few grams of CO<sub>2</sub> in a proof of concept exercise, but it looks theoretically possible to sequester an entire year of manmade CO<sub>2</sub> emissions (about 40 billion tonnes in 2020) using a small percentage of the world's supply of the rock, which is called "olivine".

That's a long way off because the scale needed to achieve anything is massive, say the academics leading this research, Allan Scott from the University of Canterbury and Christopher Oze from Occidental College, California. Importantly, the process emits considerably less CO<sub>2</sub> than it sequesters and is therefore net positive for the environment, they say.

This is true even if coal is burned to produce the necessary energy.

"This paper represents a major advance in the ability to reduce global CO<sub>2</sub> emissions using mineral sequestration," Scott said in an email.

The key is a substance called magnesium hydroxide. Scientists have long

known that it effectively sequesters CO<sub>2</sub>. The problem has been finding a large supply. The breakthrough achieved by Scott, Oze and colleagues is identifying a process to extract magnesium hydroxide from olivine.

Olivine is a greenish rock that's produced in the Earth's crust and pushed to surface by faults or other processes. In New Zealand, there's thought to be a 871 billion tonne deposit in the Red Hills near Nelson.

The Semail ophiolite deposit in Oman is many orders of magnitude larger, and olivine is found on every continent.

In simplified terms, Scott and Oze ground olivine into a powder, combined it with hydrochloric acid and subjected it to an electrical current. The result was magnesium hydroxide and some byproducts that did not raise concerns or may have economic value. The hydrochloric acid was entirely recoverable, for example, and could be reused.

When carbon dioxide and magnesium hydroxide are combined, they produce magnesium carbonates, an inorganic salt that has a variety of economic uses.

Scott imagined that magnesium hydroxide would be shipped to a site producing CO<sub>2</sub>, a coal-burning plant for example. The CO<sub>2</sub> would be stripped from the exhaust and exposed to the magnesium hydroxide. The resulting material could be landfilled, injected underground or otherwise disposed of. But the CO<sub>2</sub> no longer exists and can't "leach" out or escape. And now for the scale: Using magnesium hydroxide to remove and sequester anthropogenic CO<sub>2</sub> estimated for 2020 (40B tonnes) would require about 105B tonnes of olivine. Reducing global atmospheric CO<sub>2</sub> levels by an additional 10B tonnes would necessitate a further 26B tonnes of olivine. That's about 0.1 per cent of the Oman deposit or 16 per cent of Red Hills deposit. There's probably enough olivine in Oman to last more than 1000 years.

The next step is to scale up to a few kilograms, Scott said in an interview. They've applied to protect the intellectual property, published a short paper on the process and now hope experts in other fields will contribute.

The simplest solution to global warming would be to reduce CO<sub>2</sub> emissions, Oze told an Occidental College publication. "But here's a scalable process that's readily available, so that if we're collectively willing to operate at the level of magnitude needed, we are ready to sequester and use people-made CO<sub>2</sub> at a scale once thought impossible."





# New Zealand National Gem Show 2022

**GEMS, CRYSTALS,  
FOSSILS AND MINERALS**

**WHEN: 14,15,16TH OCTOBER 2022**

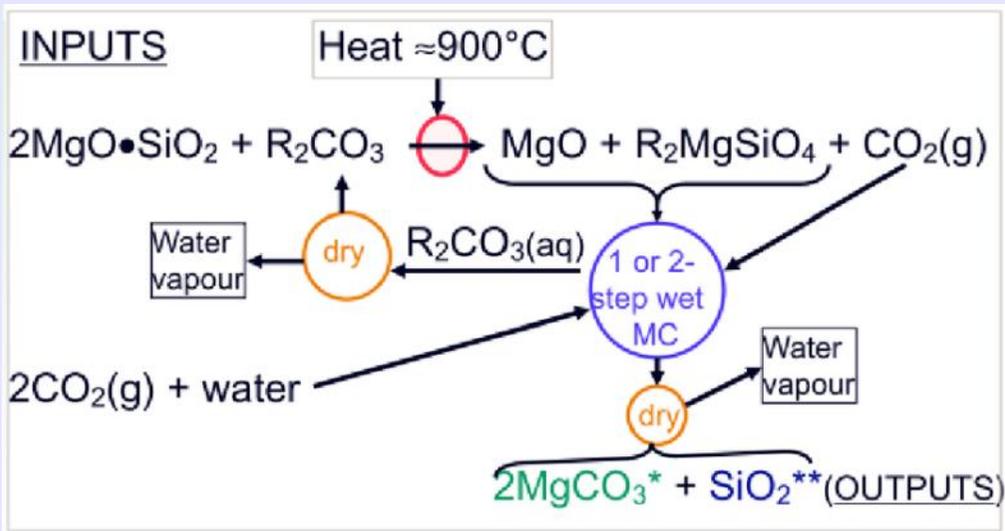
**WHERE: RICCARTON PARK  
RACECOURSE ROAD**

**ADMISSION: ADULTS \$5  
CHILDREN \$2  
UNDER 5'S FREE**



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For the scientists among you, here is the cycle for carbon capture using olivine (or Dunite).



# HETTIE'S

## ROCK & CRYSTAL SHOP

**Birdwood Ave, Beckenham, Christchurch.**

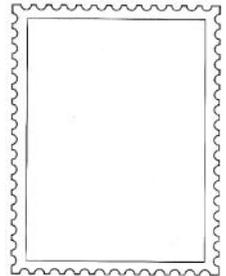
**Also: Akaroa and Queenstown**

Also: Akaroa and Queenstown





Sender CMLC, 1 Arlington Street, Burnside, Christchurch 8053.



«Field1»  
«Field2»  
«Field3»  
«Field4»  
«Field5»