

THE CMLC NEWS

The Canterbury Mineral & Lapidary Club Inc. Newsletter for June 2019



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Club Mailing Address: 14 Reynolds Ave Bishopdale,
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Meeting Venue & Clubrooms: 110 Waltham Road,
Waltham, Christchurch 7:30 pm on the second Thursday
of the month [Feb. to Nov.]

General Meeting: 13 June, 11 July, 8 August (at 7.30 p.m.)
Committee Meeting: 20 June, 18 July, 15 August (at 7 p.m.)
Micro Mineral Meeting: 6 June, 4 July, 1 August

Please remember the \$2 entry fee for our General Meetings and sign in to the meeting attendance book.

The June Meeting: This is the meeting for our Annual General Meeting. There will be a soup and toast supper.
Just a reminder: If you wish to stand for the Committee, you need to get a nominator to nominate you and the nomination needs to be with our club secretary at least one week before the AGM. This can be emailed to David via our club email.

Supper Duty: Owen Swann, Miranda Bryant, Mike Cook, Richard and Wendy Stewart.

General Meeting Auction: Material from Don McLauchlan.

Field Trip: Sunday, June 23, from 12.00. This will be our club mid-winter barbecue at Birdlings Flat. Bring your own food for cooking, plates, utensils, and drink and have a fossick along the beach. Meeting in the car park area. Please make this a family occasion.

Workshops: These are now under way. On Tuesdays from 6.30 p.m. The cost for attending a workshop evening is \$5. There is a small additional charge for getting a rock cut by one of the supervisors.

Annual Subscriptions: A big thank you to all those who have now paid their annual subscription. If you are not financial by the June AGM, you cannot participate in the meeting. Lynda will be available to accept any late subscriptions.

Brian Jones Auction Number 2: 1st June at 83 Lancewood Dve, Westlake, Christchurch. Viewing will start at 9.30 a.m., and the auction will get under way at 10.00. Please, no one on the property before 9.30 a.m. There are plenty of lapidary rough rocks for auction from Brian’s early days of collecting throughout the North and South Islands; some machinery, including a 14” saw, a 6” double wheel bench grinder, a vibra-lap, and other bits and pieces. This auction **does not include** finished/polished specimens that Brian has worked over the years.

Peter Merrett Auction: 15 June at the clubrooms. Viewing will be at 9.30 a.m. and the auction will start at 10.00. There is a large variety of different materials to suit everyone’s tastes.

May Monthly Competition Results

		1st	2nd	3rd	4th
Lapidary:	Polished Rhodinite	J.Taylor	R. Lindsay	R.Hall	4th equal C.Tait D. Macdonald C. McGregor
Fossil	NZ fossil shark tooth	D. Macdonald	J.Taylor	C. McGregor	
Mineral:	Selenite	D. Macdonald	J.Taylor	C.Tait	C. McGregor
Alphabet Cup:	XYZ	C. McGregor			
Recent Find:		J.Taylor	R. Lindsay		
Bring and Brag		Scott	C.Tait	C. McGregor	

New Members: Please make welcome these new members: Thomas Healy, Tessa Mitchell-Anyon and Liam Bignell, Marion Frey, Paul Breakwell, Gerard Scally, Scott Pierce.

North Otago Gem and Craft Show: Just a reminder that this is on July 6 and 7. It is a good idea to get your accommodation booked now, as there are many things on in Oamaru at this time of year. Our club field trip for July will be to this area. The show is held in the Scottish Hall in the historic part of town.

Our Club Show: Our club show this year will be in the clubrooms on September 28, 29. Soon we will be getting underway to organise this. The set-up will be on Friday 27 September, when all help will be needed. So, please diary this.

2019 National Show: 11, 12, 13 October: This will be held in Dunedin at the Kaikorai Valley College. I would encourage as many as possible to attend. Please consider entering the National Competitions. They need greater support these days. There seems to be a very good upsurge in people collecting and doing lapidary, but few people entering the competitions. A good way to learn is by entering. The schedule will be available at our June meeting.

The National Show 2020: 9, 10, 11 October: Our club is hosting this. An excellent venue at the Woolton Club has been booked. Members of your committee have viewed this facility and it ticks all the boxes including a very large area (2 large rooms), facilities for tea and coffee, a kitchen for stall holders and workers to use, an excellent number of electrical outlets in each room, easy access for set-up and break-down, an on-site venue for a National Show dinner. We also have 2 set-up days: 7, 8 October. Already a small working-group has been set up to look at the National Competition Schedule, and organise this. Hopefully this will be completed by this year's National Show in Dunedin this year.

Snapshot of extinction: Fossils show day of killer asteroid

New research which has been released captures a fossilised snapshot of the day nearly 66 million years ago when an asteroid smacked Earth, fire rained from the sky and the ground shook far worse than any modern earthquake.

It was the day that nearly all life on Earth went extinct, including the dinosaurs.

The researchers say they found evidence in North Dakota, US of the asteroid hit in Mexico, including fish with hot glass in their gills from flaming debris that showered back down on Earth. They also reported the discovery of charred trees, evidence of an inland tsunami and melted amber.

Separately, University of Amsterdam's Jan Smit disclosed that he and his colleagues even found dinosaur footsteps from just before their demise. Smit said the footprints - one from a plant-eating hadrosaur and the other of a meat eater, maybe a small Tyrannosaurus Rex - is "definite proof that the dinosaurs were alive and kicking at the time of impact ... They were running around, chasing each other" when they were swamped. "This is the death blow preserved at one particular site. This is just spectacular," said Purdue University geophysicist and impact expert Jay Melosh, who wasn't part of the research but edited the paper released Friday by the journal Proceedings of the National Academy of Sciences .

Melosh called it the field's "discovery of the century". But other experts said that while some of the work is fascinating, they have some serious concerns about the research, including the lack of access to this specific Hell Creek Formation fossil site for outside scientists. Hell Creek - which spans Montana, both Dakotas and Wyoming - is a fossil treasure trove that includes numerous types of dinosaurs, mammals, reptiles and fish trapped in clay and stone from 65 to 70 million years ago.

Kirk Johnson , director of the Smithsonian National Museum of Natural History who also has studied the Hell Creek area for 38 years, said that the work on the fish, the glass and trees "demonstrates some of the details of what happened on THE DAY. That's all quite interesting and very valid stuff". But Johnson said that because there is restricted access to the site, other scientists can't confirm the research. Smit said the restrictions were to protect the site from poachers.

Johnson also raised concerns about claims made by the main author, Robert DePalma, a University of Kansas doctoral student, that appeared in a New Yorker magazine article published Friday but not in the scientific paper. DePalma did not return an email or phone message seeking comment.

For decades, the massive asteroid crash that caused the Chicxulub crater in Mexico's Yucatan Peninsula has been considered the likely cause of the mass extinction often called the "KT boundary" for the division between two geologic time periods. But some scientists have insisted that massive volcanic activity played a role. Johnson and Melosh said this helps prove the asteroid crash case.

There were only a few dinosaur fossils from that time, but the footsteps are most convincing, Smit said.

There was more than dinosaurs, he said. The site includes ant nests, wasp nests, fragile preserved leaves and fish that were caught in the act of dying. He said that soon after fish die they get swollen bellies and these fossils didn't show swelling.

The researchers said the inland tsunami points to a massive earthquake generated by the asteroid crash, somewhere between a magnitude 10 and 11.

Purdue's Melosh said as he read the study, he kept saying "wow, wow, what a discovery".

The details coming out of this are "mind-blowing", he said.

Stuff April 1 2019

Four spiders with serpent tails found fossilised in 100m year old tree

Deep in a tropical rain forest, during a time when dinosaurs walked the Earth, four itty bitsy spiders crawled down a tree, got stuck in some sticky resin and never climbed up again.

Some 100 million years later, blocks of amber containing their fossilised forms wound up on the desks of two scientists in China.

Both researchers looked at the perfectly preserved animals and came to the same conclusion: This was an entirely new kind of animal. They introduced their discovery, dubbed *Chimerarachne yingi*, in a pair of papers published Monday in the journal *Nature Ecology and Evolution*.

With its curious mix of ancient and modern traits - a long, skinny tail inherited from a distant arachnid ancestor, but a silk-producing organ like those found in spiders today - the tiny *chimerarachne*, or "chimera spider," is not a member of the immediate family.

But it is one of modern spiders' closest cousins, and it presents some intriguing hints at how they evolved.

The *C. yingi* fossils were uncovered by amber miners in northern Burma, sold to dealers, then purchased by researchers at the Chinese Academy of Sciences.

By coincidence, two sets of the fossils became available around the same time, and Bo Wang and Diying Huang - colleagues in the academy's paleobiology lab - began to analyse them almost simultaneously.

Neither was aware of what the other was up to until they submitted their studies for publication.

Happily, their results were close enough that the journal opted to publish both papers.

Both describe creatures so small they could fit on the tip of a fine-point pen, with eight legs and tiny but formidable fangs.

Their hindquarters bear spinnerets, the same organs from which living

species spin their silken webs.

The males also have modified pedipalps - syringe-like appendages on the fronts of their faces that modern spiders use during mating.

(Ready to learn more than you ever wanted to know about spider sex?

Male spiders don't have penises, so they instead deposit their sperm on a ready-made swatch of web, suck up that sperm with their pedipalps and inject it into a female. The whole affair typically ends with the female spider eating her mate.)

Other features of chimerarachne appear much more primitive.

Their torsos are segmented, like those of older arachnid groups, and they have long, whip-like tails, called telsons, that seem to be inherited from a more primitive ancestor.

This mix of features gave the spiders their name: a reference to a mythical creature with a lion's head and serpent-like tail.

This odd appendage, which is absent in modern spiders, can be found in vinegaroons, a group of nightmarish scorpion-looking creatures that lives today.

And it's visible in one of the oldest fossils from a close spider relative, *Attercopus fimbriunguis*, which dates back 380 million years.

Paul Selden, a paleontologist at the University of Kansas who unveiled that other ancient arachnid and worked with Wang to analyse this latest discovery, said he'd been waiting to find something like this ever since *A. fimbriunguis* was discovered.

"It seems to be an intermediate form," Selden said - midway between the spinneret-less *A. fimbriunguis* and the spiders of today.

Due to this mix of features, the two research groups differ slightly over where *C. yingi* fits in the spider family tree. But they agree it is a close cousin of the Araneae, or true spider, order.

Scientists have identified many spiders from this lineage in the same amber deposit from the Cretaceous period. Their numbers suggest that even 100 million years ago, chimerarachne was already a "living fossil" - a species that resembles creatures otherwise known only from the fossil record, Selden said.

Like today's horseshoe crabs and ginkgo trees, it was a holdover from an earlier period in evolutionary history.

Selden even entertained what he called the "tantalising possibility these creatures are still around."

C. yingi wouldn't be the first fossil arachnid to show up in the wild.

In the 1880s, scientists working in Madagascar were surprised to see a new type of "assassin spider" crawling about.

Until then, that lineage had only been found only in 50-million-year-old

amber.

Gonzalo Giribet, an evolutionary biologist at Harvard University who worked on Huang's team, said the new discovery might also shake up the arachnid family tree.

Scientists have traditionally used silk spinnerets to distinguish true spiders from other species.

Some argue that spinnerets were the key innovation that allowed spiders to become so successful; there are nearly 50,000 known spider species alive today.

"And now suddenly we have another group that is not a spider that also has those characteristics," Giribet said. "It challenges our view of how we define 'spider.'" *The Washington Post*



HETTIE'S

ROCK & CRYSTAL SHOP

Birdwood Ave, Beckenham, Christchurch.

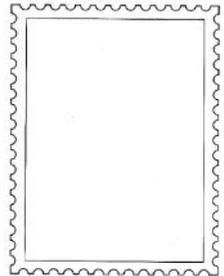
Also: Akaroa and Queenstown

Open 7 days 10 a.m. to 5 p.m.





Sender CMLC 14 Reynolds Ave Bishopdale, Christchurch 8053



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