



BATU CAVES SCIENTIFIC EXPEDITION

4th Newsletter

By Malaysian Cave & Karst Conservancy

Information and Images compiled by Nuratiqah A.R. September, 2019

<https://www.mckc.org.my/>

On 24th August 2019, the 4th progress meeting of the Batu Caves Scientific Expedition was held at the Malaysian Nature Society (MNS) Auditorium. Ten participants attended the meeting and gave an update of their current progress whilst those who did not attend submitted their reports to the Malaysian Cave & Karst Conservancy Executive Secretary who presented on their behalf at the meeting.

The palaeontology team was represented by Dr Lim Teck Wyn who provided an update on the quaternary mammals survey at Batu Caves. Three surveys were done at Cistern Cave on 13th and 14th July 2019 and at Icibawa Cave on 3rd August 2019. The Cistern cave survey noted that the condition inside the cave is still good, with no visible disturbance to the remaining fossil-bearing sediments. Fossils discovered during the trip include teeth of a pig and a broken tip of an orangutan canine. Some other fossils spotted during the survey, mostly pigs, were left untouched within their original sedimentological context. The survey on 3rd August 2019 found only two teeth (one complete, one broken in half) embedded in very hard surrounding rock near the entrance but no attempt was made to extract these two samples. In addition, according to Mr Lim Tze Tshen, this interesting historical fact alone confers the site a certain degree of importance as a type locality for the first orangutan fossils found from Peninsular Malaysia, if a type locality carries any meaning at all in modern-day palaeontology research. However, Mr Lim Tze Tshen believed it certainly deserves a place in the history of Quaternary mammal research in Malaysia.

Dr Ros Fatihah reported that the morphology of the caves shows obvious influence from structural trends. She found that narrow passages form along major structural trends towards the northwest and northeast. Dissolution by recent fluvial activities are obvious along these major trends in most caves at the ground level such as Swamp and Ichibawa, while roof collapse may have enlarged the caves at the higher level such as the Cistern. She has also observed clean calcite material on the fossilized bee comb found in Batu Caves by H. Stauffer in 1970 and an attempt to date it by using radioisotope U-Th technique will be carried out in October, together with analysis for paleoclimate.

Dr Ruth, representing the flora team reported that during their survey of the summit they noted the presence of the rare endemic fan palm, *Maxburretia rupicola* which is restricted to two limestone hills in Selangor and grows well at the shoulder of cliffs. They failed to find the endemic orchid, *Corybas calcicola*. Dr Ruth also went to the swampy valley at Gua Damai to look for the new keladi species but couldn't find any flowers during this trip. They are planning another trip to the same areas to locate the flower. Dr Yong Kien Thai who also join the trip to the summit documented a tiny heart shape leave fern, *Calciophilopteris alleniae*, which is endemic to Peninsular Malaysia. In addition, Dr Yong Kien Thai also found the liverwort species *Cololejeunea pseudostipulata* which is considered a new liverwort record for Peninsular Malaysia. Mr Ong Poh Teck, the Orchidologist from

FRIM found the tiny orchid, *Taeniophyllum pusillum*. This species is interesting because it has a 'smiley face' flower and leafless which means photosynthesis is carried out through its roots.

With regards to the fauna, Dr. Lim Lee Sim updated her findings on bat diversity using acoustic surveys. She visited four caves namely, Villa Cave, Dark Cave, Belah Cave & Pandan Cave. Bats were detected in three caves except Villa Cave. Eight bat species (*Eonycteris spelea*, *Rousettus leshenaultii*, *Hipposideros diadema*, *Hipposideros armiger*, *Rhinolophus affinis*, *Rhinolophus lepidus*, *Rhinolophus stheno*, *Taphozous melanopogon*) were detected together with three unknown species of open space bats. According to Dr. Lim, bat assemblages between the caves are different, depending on their function, elevation from the ground, and the size of the cave.

Dr. Rosli presented an updated list of butterflies at Batu Caves. Nine additional butterfly species were added to the list including the uncommon Blue Glassy Tiger, (*Ideopsis similis perimilis*). This species is very interesting because it was previously only reported to occur in the northern part of Peninsular Malaysia namely, Kedah and Terengganu.

Dr Choong gave an update on his findings regarding Odonata from his trip to Lembah Damai. Six species of Odonata were recorded: *Lathericista asiatica*, *Neurothemis fluctuans*, *Orthetrum luzonicum*, *Orthetrum sabina*, *Orthetrum testaceum* and *Potamarcha congener*. All of these are common dragonfly species previously recorded from the Gua Damai area. To date, the number of species recorded for Batu Caves still stands at 25, no change from the previous update.

Updating on herpetofauna, Dr Vince Teo Eng Wah said that he recorded a Metropolis Bent-Toed Gecko (*Cyrtodactylus metropolis*) at Gua Belah, Asian Common Toad (*Duttaphrynus melanostictus*) at Gua Ichibawah and Common Wolf Snake (*Lycodon capucinus*) at Gua Damai in July and August.

Miss Hon Yuen Leong mentioned that the nature guide team from Malaysian Nature Society Selangor Branch is currently planning for an educational trail at Batu Caves and Dr Ruth suggested that the nature guide team work together with the Damai Extreme Park Management. Before the meeting ended, Dr Ruth also raised her concern about feral dogs which will threaten the serow population because the feral dogs usually hunt young serow as their food. Dr Ruth hopes relevant parties will take action to control the population of feral dogs at Batu Caves.

The Batu Caves Scientific Expedition is progressing well and is generating important data which will be useful for conservation and management purposes. The Malaysian Cave & Karst Conservancy highly appreciates everyone's contribution, commitment, time, and expertise that made this scientific expedition a success. With three more months to go before this expedition ends and we are looking forward for more discoveries! Many thanks to everyone.



Fossilized Bee Comb
(Photo by Ros Fatihah Muhammad)



Maxburretia rupicola
(Photo by Yong Kien Thai)



Calciophilopteris alleniae
(Photo by Nuratiqah AR)



Taeniophyllum pusillum
(Photo by Nuratiqah AR)



Lycodon capucinus
(Photo by Zakariya Saiun)



Pongo sp. incisor
(Photo by Lim Tze Tshen)



Ideopsis similis perimilis
(Photo by Rosli Omar)



Group photo of the 4th Batu Caves Scientific Expedition progress meeting

From left: Dr. Nur Atiqah Abd Rahman, Dr. Yong Kien Thai, Dr. Lim Lee Sim, Dr. Ros Fatihah Muhammad, Dr. Choong Chee Yen, Dr. Rosli Omar, Dr. Ruth Kiew, Dr. Zubaid Akbar and Dr. Lim Teck Wyn

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