

Love for Geology leads to fossil find

EDUCATION

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By LEE CHONGHUI



Preserved in stone: The fossil of the Stegodon tooth removed from the limestone cave in Gopeng, Perak.

HER passion for Geology began in the most unexpected way.

Dr Ros Fatimah Muhammad was a new Foundation in Science student at Universiti Malaya (UM) in 1991, who often walked past the Geology Department to get to classes conducted at UM's Third College.

"One day, I found a group of geologists gathered outside the department and they looked like they were having fun. So, I went up to them and asked them what they were doing, what was Geology?"

"The seniors then took me to the Geology museum and the rest was history.

"I found my calling," recalled Ros Fatimah with a laugh.



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The following year, she started her degree in geology in UM and furthered her studies in the same institution until she received her doctorate in the same subject – geology specialising in Karst geomorphology.

It is the study of unusual surface landforms that develop in terrains underlain by soluble rock such as limestone, dolomite, and gypsum.

Even though she has been in the field for almost three decades, the eyes of the expert from UM's Geology Department still lights up whenever she speaks about her work.

“I've had many interesting finds throughout my career. The most exciting one was finding a Stegodon fossil – the very first discovery in Malaysia!

“There is no record of Stegodon fossils even in Borneo.”

Ros Fatimah was the lead researcher who identified the fossil of the Stegodon – an extinct elephant – in a limestone cave in Gopeng, Perak recently.

She partnered with Palaeontological Society of Malaysia's vertebrate palaeontologist and zoo archaeologist Lim Tze Tshen; the other scientist behind the find that would make Ross Geller from world-famous sitcom 'Friends' excited.

With an estimated geological age of between 30,000 and 80,000 years, it is said to be the country's first discovery of a Stegodon fossil.

“This is the first ever Stegodon fossil found in Malaysia.

“Credit of the find also goes to Kinta Valley Watch, a group of cave enthusiasts.

“They were on one of their trips in July and stumbled across this odd looking fossil which they have not seen before.

“Hence, they contacted UM to help identify the fossil. Lim and I immediately went and took loads of photos and videos and had them sent to various experts around the world,” said Ros Fatimah.

Given the distinct shape and structure of the Stegodon's teeth, the experts very quickly confirmed that the fossil was of a Stegodon.

The fossil was excavated on Aug 15 with the help of the Perak Department of Minerals and Geosciences and the Perak State Park Corporation.

A genus Proboscidea is a long-extinct family of the Stegodontidae.

This ancient elephant is different from the modern Asian elephant (*Elephas maximus*), which still exists in Malaysia, in terms of morphology, ecology and taxonomy.

The discovery came six years after fossils of a herbivorous dinosaur tooth and the remains of a



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Congratulating the researchers, UM vice-chancellor Datuk Abdul Rahim Hashim said the discovery was a milestone in the field of Quaternary palaeontological studies in Malaysia.

“Well done and congratulations to Ros Fatimah and her team who have done us proud!

“So far, only two doctorate degrees have been awarded in this field.

“The first was for fossils and paleo-ecology of large mammals while the second was for fossils and paleo-ecology of rats.”

Abdul Rahim also expressed his appreciation to the Perak Menteri Besar Office, Perak Department of Minerals and Geosciences and the Perak State Park Corporation for cooperating and providing support for further studies to be conducted at the research site.

“I hope this cooperation will continue for various studies in the future.”

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