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Gems on the rocks

Deep in the recesses of Gunung Jebak Puyuh are huge caves with winding passages, unique formations and important wildlife. But all will be gone if plans to quarry the outcrop continue.

HYMEIR K.

I SPENT three days at the Gunung Senyum Recreational Forest in Jengka, Pahang, recently. The jewels of this site are, without a doubt, Gunung Senyum and Gunung Jebak Puyuh. Located at just about the geographical centre of Peninsular Malaysia, both peaks are hard to miss. Jutting dramatically out of the rolling plains of central Pahang, they are spectacular hills with equally spectacular caves featuring high ceilings and large chambers. Some of these chambers have skylights that allow the sun's rays to penetrate the normally dark recesses of the caves.

The hidden jewel, however, has to be the lesser-known Gunung Jebak Puyuh. This gem takes a little effort to visit but that extra work is rewarded by caves which, although not as large as those at Senyum, are equally spectacular. The caves of Jebak Puyuh are less visited and so, are more pristine. They are packed with exquisite formations and mysterious hidden gardens.

That was my first visit to Jebak Puyuh in 18 years, the purpose being to save it from being blasted away by cement producer YTL Cement. The limestone of Jebak Puyuh happens to be suitable as the main ingredient in the production of cement. If quarrying is allowed, the majestic limestone karst that is Jebak Puyuh will cease to exist in 60 years.

The initial Environmental Impact Assessment on the project was not approved but the Department of Environment has requested for a detailed EIA. One is being prepared by YTL Cement.

The limestone of Jebak Puyuh and Senyum is of Permian age or about 240 million years old. The rocks began as deposits of dead shelled creatures, corals and skeletons of creatures which lived in the warm shallow sea that covered the area millions of years ago. Deposits laid down over thousands of years are eventually transformed by heat and pressure into limestone rocks that are later exposed on the earth surface by earth movements. The rocks were later hollowed out by

rain water. After the caves were formed, secondary formations like stalagmite and stalactite gradually took shape inside. This process continues to this day. However, all this is set to disappear if quarrying of Jebak Puyuh is allowed.

Islands of wilderness

Just like an iceberg, about 95% of a limestone karst is underground, with only a small portion sticking out of the ground. These towering hills are like islands surrounded by tropical rainforests. Being isolated and offering many different types of micro-habitat, many plants and animals have adapted to living in this harsh and dry habitat. Over millions of years, these life forms have evolved into unique species which are often confined to a single hill.

Some 15% of Malaysia's endemic plants are found on limestone karsts. That is impressive considering that these geological structures constitute less than 2% of Malaysia's land area. Biologist Reuben Clements has found 47 species of land snails on both Senyum and Jebak Puyuh, of which seven are endemic. Prominent botanist Dr Ruth Kiew from the Forest Research Institute of Malaysia reported that the plant *Senyumia minutiflora* is found only at Senyum and Jebak Puyuh, and nowhere else in the world. What's more, it is the only representative of its genus - so if the species becomes extinct, the genus also becomes extinct.

Kiew has said that the population of the plant "has noticeably decreased since Gunung Senyum was opened up to tourism. The Jebak Puyuh population is therefore very important for its continued existence".

Another rare plant there is the balsam *Impatiens ridleyi*. The only other place with this plant is Batu Caves in Selangor. However, the species is difficult to find at Senyum and Batu Caves. Jebak Puyuh remains the only pristine area available for the continued survival of this rare plant.

The Senyum and Jebak Puyuh outcrops are rare features of the

landscape in Pahang and, compared to 35 other sites surveyed in the area, support very large bat populations. At least 19 bat species have been recorded there. One bat species found in high numbers is the *Eonycteris spelaea*. It is the main pollinator of durian and *petai* and, so, is of considerable economic value to surrounding villages that grow or collect these products. The abundance of bats also suggests that they are an important source of natural insect pest control for the Jengka plantations.

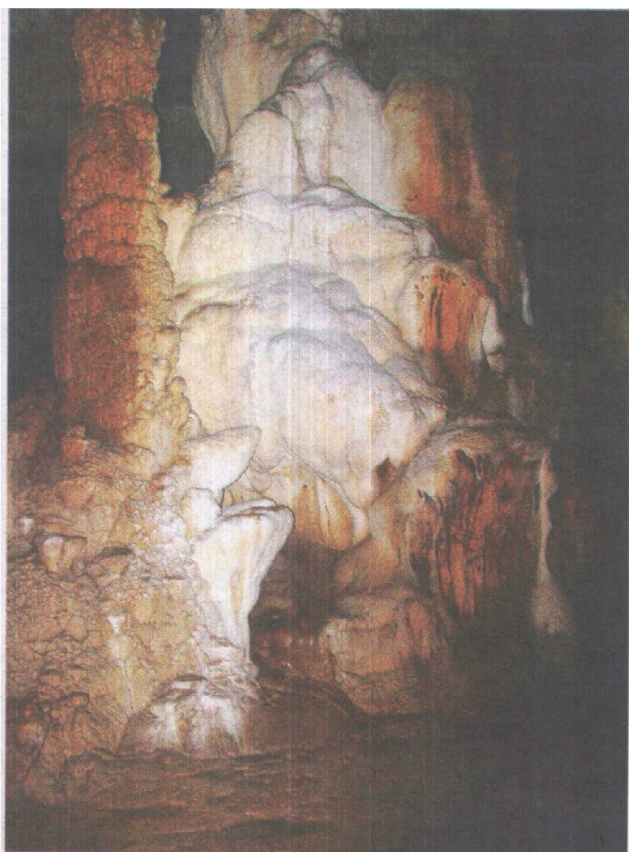
Apart from being an important habitat for rare and endangered flora and fauna, Jebak Puyuh complements Senyum in terms of tourism. Senyum is appealing for mass tourism due to its easy access - it is just a few minutes' walk from the car park. Jebak Puyuh, on the other hand, is the wilder of the two as it takes a 45-minute hike to reach. Not having Jebak Puyuh available for visitors will certainly

impact upon the appeal of Gunung Senyum Recreational Forest as a whole. Additionally, a cement factory and a quarry nearby will certainly put off visitors.

The Malaysian Karst Society advocates underground quarrying of limestone resources particularly where the surface area has been degraded or not under natural forest. Underground mining may cost more but is it really worth blasting away above-ground limestone resources for short-term monetary gains? This is the part that harbours unique flora, fauna, archaeological artifacts and geological features, in addition to providing recreational, tourism and landscape scenery values. The reasoning is simple - why destroy the bit that is important when there is an abundance of the same underground?

■ The writer is the president of the Malaysian Karst Society (www.mykarst.org).

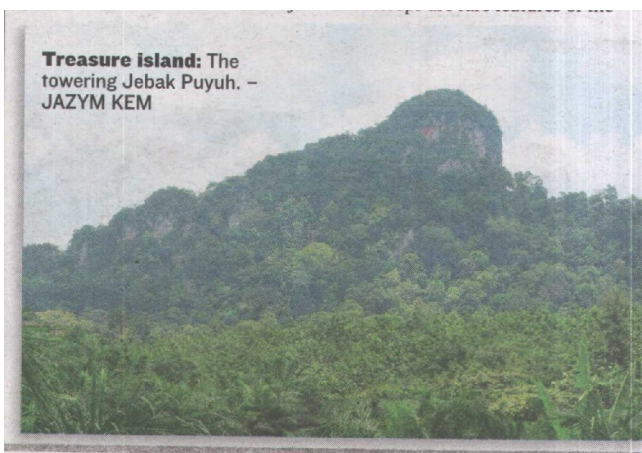
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