

Headline	IT COULD BE 'LIGHTS OUT' FOR FIREFLIES		
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The declining population of fireflies along Sungai Selangor has raised concerns about their survival. **DAWN CHAN** reports

KUALA SELANGOR

A COLONY of fireflies attracting tourists to this district with its "light show" in Kampung Kuantan here is heading for extinction.

A study by the Forest Research Institute Malaysia (FRIM) revealed that almost half the Coleoptera order beetle's population there had diminished over the past 10 years.

FRIM genetic laboratory senior research officer Dr Shawn Cheng said the institute was tasked with monitoring the firefly population along Sungai Selangor by the state government, a duty that led to the recording of a drastic decline of the insect, which is also famously referred to as lightning bugs.

He said the drop could be seen in its monitoring project over the

years through digital night photography, coupled with image analysis.

"Our monitoring project has reported a decline of approximately 40 per cent in firefly numbers since 2007.

"The primary cause of population decline appears to be habitat destruction along riverbanks where fireflies are found.

"The main problem is the conversion of their habitat into palm plantations and for agricultural purposes.

"This is a reason for concern because the life cycle of fireflies is intricately connected to the environment, namely plants, animals, river water, and soil and water quality.

"Any change to the environment or pollution will impact these elements.

"Because they are intricately connected to the environment,

fireflies can also be viewed as an indicator of an ecosystem's health," he told the *New Sunday Times* recently.

On a monthly basis, researchers took pictures of fireflies at nine to 10 stretches along Sungai Selangor, where a montage would be created and an automated scoring of the beetles would be produced.

Cheng said this effort was done over months and years, and the number of fireflies had plunged.

"We are unable to measure the entire population and can only take samples.

"But the low figures are reflective of what is happening in Kuala Selangor," he said.

He described the fireflies in Kampung Kuantan as one of the few species in the world with the ability to flash synchronously.

He said the insects are a biodiversity icon in Selangor, and un-

like fireflies found in temperate regions, which comes out only in spring or summer, the *Pteroptyx tener* species was found throughout the year in the tropics.

"The Kuala Selangor fireflies are possibly the only population in the world that is actively monitored.

"But, in general, firefly and glow worm populations all over the world are facing pressure from humans, as well as the environment."

Cheng said Sultan of Selangor Sultan Sharafuddin Idris Shah also expressed concern about the dramatic drop in firefly numbers in the state and requested FRIM to help the state government in rehabilitating the Sungai Selangor firefly population to its original glory.

A team of FRIM researchers, led by Cheng, met state representatives from the Economic Planning Unit, the office of Eliz-

abeth Wong, who is executive councillor for tourism, consumer affairs and environment, as well as the Selangor Water Management Authority (Luas) on May 4 and July 21.

Cheng said the team presented FRIM's proposal to develop a management plan for the Sungai Selangor fireflies over the next three years.

"FRIM proposed several targeted research projects to help us bridge the gap in our understanding of firefly biology and ecology before a management plan can be put in place.

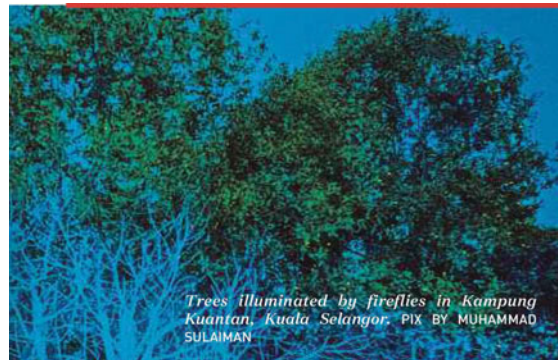
"Also included was a proposal to review legislation protecting fireflies and their habitat.

"The Kuala Selangor fireflies are protected by the Luas Enactment and any activity or work in the protection zone needs to obtain written permission from its director.



Dr Shawn Cheng

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“The protected zone is between 150m and 400m on the right and left of Sungai Selangor in the Pasangan sub-district.

“FRIM hopes to strengthen this enactment or look at other laws that may help in firefly conservation,” Cheng said.

He said they were expected to give a briefing to the executive council soon.

“Last year, FRIM went further by applying molecular DNA techniques to understand the fireflies better.

“We used DNA tools to analyse the stomach contents of adult fireflies and analyse the firefly genetic diversity along Sungai Selangor.

“The findings of our report are currently on their way into scientific reports and journal publications.”

FRIM had voiced plans to work with the Kuala Selangor District Council and Tourism Selangor to promote and publicise the ecotourism destination.

Cheng said FRIM hoped to provide them with a tagline for the

Kuala Selangor fireflies, “Show starts tonight, every night”, photographs, as well as creative writing to promote a better understanding of the tourist attraction.

FRIM was also hoping to launch a children’s series on the Kuala Selangor fireflies, titled *Pyro the Elephant Whisperer*, next month.

The characters and storyline for the book were developed by Malaysian artists Cheng and Jinn Wu.

The story is based on the flora and fauna in Kuala Selangor and revolves around Pyro, a little firefly who lives in Kampung Kuantan.

Pyro chanced upon a baby elephant that got separated from his herd.

“The story is loosely based on events surrounding the killing of what we think is the last elephant herd in Kampung Kuantan, from records in the National Archives in Kuala Lumpur.

“FRIM hopes that the book will encourage an interest in fireflies among the younger generation.”