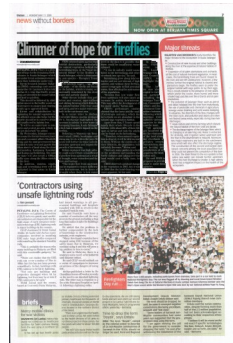


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Glimmer of hope for fireflies

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PETALING JAYA: There is a glimmer of hope for the remaining firefly colonies in Kuala Selangor which are under threat as measures to preserve their habitat are under way.

Forest Research Institute Malaysia (FRIM) entomology unit senior researcher Dr Laurence Kirton told *theSun* it is vital that firefly prone areas are identified for conservation and land acquisition.

This should be followed by strict enforcement in the buffer zones or river reserve to ensure land clearing is only up to approved limits.

Kirton said rehabilitation by replanting the natural vegetation in the affected areas also helps but the priority should be to conserve areas still unaffected by habitat loss.

"It will be an easier task to conserve and protect an area which is not yet disturbed," he added.

On Wednesday, Selangor executive councillor for environment, tourism and consumer affairs Elizabeth Wong said the state government has decided to take over and gazette the 20km stretch of land along the river surrounding Kampung Kuantan and Kampung Belimbing. She said the state will also create a 100km buffer zone along the 20km stretch of the river.

In addition, rumbia, nipah, sago and berembang trees will be replanted in four areas in Kuala Selangor.

FRIM entomologists agreed that habitat destruction, particularly the natural vegetation behind the berembang trees, is the "most imminent threat" to the fireflies in Kuala Selangor, which is dominated by one species - *Pteroptyx Tener* (P.Tener).

The juvenile stages - egg, larva and pupa - of the firefly are found in the habitat, which is moist, occasionally inundated by the river water and partially shaded.

Other threats include river pollution and erosion, aquaculture and shrimp farming which disturbs the natural habitat of the river snail and larva, and two major reservoirs built in the catchment area.

In a recent letter to *theSun*, Universiti Malaya marine ecologist Dr A. Sasckumar highlighted the increase in salinity in river water in Kampung Kuantan, Kuala Selangor which has a negative impact on the fireflies.

Referring to Maarten van Breemen's study (2008), Sasckumar said rising sea levels within the next 50 years will further increase salinity intrusion upstream and impact the growth of berembang.

Kirton explained that high salinity could occur if there is insufficient water flow from upstream as a result of drought, water extraction and the dam and barrage.

"The water flow from upstream can be regulated to ensure sufficient flow downstream, but in times of drought when there is low water

level in the dam it is possible that there could be insufficient water released.

"A rise in salinity could cause harm to the berembang and other riverbank tree species," he said.

Berembang grow along tidal estuaries and are not tolerant of high salinity, and without them fireflies, cannot congregate to find potential mates, thus affecting the sustenance of the population.

"Besides that, low water flow from upstream will also cause an increase in acidity downstream. This may affect the development of the snails' shells," Kirton said.

FRIM's preliminary studies showed that the larva and the snail (*Cyclotropis carinata*), which the larva feeds on are abundant in the natural sago vegetation habitat.

Apart from that, P.Teners spend nearly their whole lifecycle in the habitat, with about 60% of their life span as larvae and only the adults can be found on the berembang.

"Therefore, when natural vegetation is cleared, it will be detrimental to them. Without the continuity of their lifecycle, the population will definitely decrease," Kirton said.

There are many parties involved in the problems surrounding the firefly colonies and taking over the land would cost a hefty sum, he said.

FRIM observed a gradual change in the vegetation in 2007, but it was in 2008 that the land clearing was more apparent, Kirton said.

In January, FRIM wrote to the Kuala Selangor District Council (MPKS) to highlight the issue.

The letter was also copied to various agencies including the Selangor Tourism, Consumer Affairs and Environment Committee chairman, following which meetings were called by various agencies to discuss the issue.

"All agencies are hindered by the fact that most of the land along the riverbank is privately owned. Nevertheless, they are looking into possibilities of re-acquiring the land," Kirton said.

He said FRIM is prepared to provide input to assist these agencies.

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