



Persatuan Pengguna Pulau Pinang Consumers Association of Penang

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Press Statement

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World Firefly Day: Help Keep the Sparkles Burning

Every year on the first weekend of July, an annual event is organized to celebrate the importance of fireflies in our ecosystems and to increase public awareness about the risks these luminous insects face. The theme for 2025 World Firefly Day is "Help us keep the sparkles burning," which will be held on July 5th and 6th.

World Firefly Day serves to draw attention to the ongoing threats these luminous beetles are facing. One of the many reasons for their population decline is habitat destruction. Fireflies flourish in wetlands, forested areas along riverbanks where their larvae grow in moist soil or leaf litter and in mangrove forests where they thrive in the brackish water.

Fireflies rely strongly on mangroves as habitats due to its unique wetland ecosystem with the mangrove swamps acting as shelters to insects and other invertebrates, while acting as first line of defence during extreme weather like storms and flood surges. Mangrove trees along riparian areas are the best sites for fireflies to establish their habitat as a food source and breeding site.

Unfortunately, large tracts of mangroves have been cleared for agricultural, aquaculture, flood mitigation projects, and logging of mangrove trees for the charcoal industry, making these areas unsuitable for the continued survival of firefly larvae and their snail prey. As forests are cleared for development, firefly habitats dwindled and disappear. This is happening not only in Malaysia but throughout South East Asia as a result of human population growth and development.

Another threat is light pollution. Fireflies utilize their glow to attract mates, but streetlights, house lights and excessive outdoor lighting can disrupt the communication between fireflies, impacting their reproduction cycles. Furthermore, the proliferation of artificial lights can disrupt the intricate mating behaviour that depends on a male winning over a female with its flashing posterior.

Other human activities, such as dam construction have depleted the food supply of fireflies, resulting in a reduction in the population size of this distinctive insect. Higher soil acidity and higher metal concentration inhibit firefly larvae from developing and growing. This is made worse by climate change, as fireflies require moist environments, which are disrupted by droughts and other extreme weather events. Additionally, pesticides kill fireflies directly or reduce their access to food sources like slugs and snails, making efforts to conserve synchronous fireflies more challenging.

Fireflies occupy important ecological niches in their environments by playing a vital role in controlling potential agricultural pests. Firefly larvae are predators that feed on slugs, snails, worms, and other mollusc invertebrates, so naturally regulating their populations. The delicate ecological balance that has been established over millions of years may be disrupted with their disappearance, which can lead to uncontrolled reproduction of certain prey species.

As environmental health indicators, their existence, extinction, or condition can provide information about the state of the ecosystem. Clean water, undisturbed soil, minimal light pollution, and suitable vegetation are all necessary for their intricate life cycle. Their dwindling numbers, which impact many other species, are a sign of wider environmental deterioration. It can become more challenging to identify detrimental environmental changes in the absence of these indicator species until the problem reaches crisis proportions.

Preventing fireflies from becoming extinct is both a challenge and an opportunity for conservation. The Consumers' Association of Penang calls for effective firefly conservation that requires addressing multiple threats simultaneously: protecting and restoring habitats, reducing light pollution, limiting pesticide use, managing invasive species, mitigating the effects of climate change, among others. The challenge of saving fireflies also provides an opportunity for the public to participate in broader conservation efforts by developing an emotional connection with these beloved insects.

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