

Botanists name astonishing new species of 'fairy lantern' from Malaysian rainforests

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Fairy lantern. Credit: University of Oxford

Oxford University Scientist Dr. Chris Thorogood from Oxford Botanic Garden teamed up with Siti-Munirah at the Forest Research Institute Malaysia, and local explorer Dome Nikong to describe a strange plant

from the depths of the Malaysian rainforest.

Their results are just published in the journal *Phytokeys*.

So-called 'fairy lanterns' (genus *Thismia*) are among the most extraordinary-looking of all [flowering plants](#). These curious, leafless [plants](#) grow in the darkest depths of remote rainforests where they are seldom seen. There are some 90 species worldwide, distributed across the forests of Asia, Australasia, South America, and the U.S.. They all lack true leaves and chlorophyll, obtaining their food from root-associated fungi shared with other [green plants](#). Their mysterious flowers emerge just briefly, and often under [leaf litter](#), so few people are lucky enough to encounter them.

Scientists at Oxford and in Malaysia have just described a species of fairy lantern completely new to science.

It was first discovered by rainforest explorer Dome Nikong in 2019 who, astonishingly, found the plant growing along a popular tourist track on Gunung Sarut, a mountain located in the Hulu Nerus Forest Reserve in the state of Terengganu. In February 2020, Dome Nikong was joined by a team of botanists including researcher Siti-Munirah. To their dismay, the only known 'fairy lantern' plants had been destroyed by [wild boars](#) except for a single fruiting specimen.

Examining the little material collected from the two trips, Siti-Munirah and Dr. Chris Thorogood were able to describe and illustrate the new species. They examined the architecture of the flower—its shape, colour and surface characteristics. They found that it has a unique and peculiar orange, lantern-like flower with pillars holding up a so-called 'mitre' – an umbrella-like structure, the function of which is a mystery.

Together, the scientists named the plant *Thismia sitimeriamiae* after

Dome's mother Siti Meriam, honouring the support she has given his life's dedication to [conservation work](#) in Terengganu, Malaysia.

The plant's unique and remarkable 'mitre', colour and surface texture make *Thismia sitimeriamiae* among the most eye-catching plants ever described from Peninsular Malaysia. Dr. Chris Thorogood says, "The extraordinary architecture of the flower raises interesting questions about how it is pollinated.

Other species appear to be visited and pollinated by little fungus gnats, but in truth, we know little about the ecology of these plants—they are a mystery. What is certain is that the plant is exceptionally rare—it has only been seen twice and may already be extinct—attempts to relocate the plant have failed. For these reasons, the conservation status of the plant is Critically Endangered (CR) according to IUCN criteria.

The scientists recommend in their paper, published in the journal *Phytokeys*, that further survey work is needed to bring fairy lanterns out of obscurity and inform the conservation priorities for these mysterious plants—many of which have been seen only once, and some of which may never be seen again.

More information: Mat Yunoh Siti-Munirah et al, *Thismia sitimeriamiae* (Thismiaceae), an extraordinary new species from Terengganu, Peninsular Malaysia, *PhytoKeys* (2021). [DOI: 10.3897/phytokeys.179.68300](#)

Provided by University of Oxford

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