The Stinking Flower

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Life Cycle of the Titan Arum

Flower cycle
once every four to five years, it produces a flower.

Roughly a week before opening, the frills on the spathe can be seen.

A spike emerges from the corm after the dormant period.

The fully blooming flower smells like a dead animal and attracts pollinators.

While the plant is dormant, its underground corm waits to begin a new cycle.

The spathe dies back after two months, and the plant becomes dormant again.

The leaf falls over and dies after 12 to 18 months, and the plant becomes dormant again.

The leaves gather energy from the sun and store it in the corm. It will need this energy to bloom.

The fully blooming flower withers a day after it opens.

Berry-like fruits grow on the spadix. Birds eat the fruits and help disperse the seeds.

Source: www.chicagobotanic.org

THE image that a flower evokes in our minds is that of something beautiful, fresh, and with a pleasant odour. But you might never have heard of a stinking flower. A flower that smells like the essence of rotting meat combined with the essence of rotting onion. Yes, this is how members of the U.S. botanic garden who endured its blooming described the flower.

In 1878, an Italian botanist named Odoardo Beccari found the titan arum in the dense equatorial rainforests of the island of Sumatra in Indonesia. He collected samples of the plant and sent them back to Florence to study. His live plant samples all died, but some seeds survived and grew. A single seedling was sent to the Royal Botanic Gardens, Kew. In 1889, this plant became the first titan arum cultivated indoors to successfully bloom.

Amorphophallus titanium, also known as corpse flower, is the largest unbranched inflorescence in the world. The inflorescence rises from a tuber, a swollen underground stem modified to store food for the plant. This tuber is more or less spherical in shape and weighs around 70 kg or more, and is the largest such structure in the plant kingdom.

The plant produces a single leaf that can reach 20 feet tall and 15 feet across. This leaf will grow for about one to one-and-a-half year and almost looks like a tree. The plant starts its first flowering after 7 to 10 years, while some plants manage to flower every 2 to 3 years.

The plant blooms for 24-36 hours only and so gathers the interest of botanists and scientists. The blooming of this plant was such a rare event that it would get media coverage and a large crowd of visitors.

The inner cone type structure of the plant, called spadix, starts to self-generate heat, a process known as thermogenesis. Then, it starts producing foul-smelling compounds. It produces the most intense odour on the first night of blooming. By the end of the second day of blooming, the odour is much less intense.

Tim Pollak, outdoor floriculturist at the Chicago botanical garden, says that the smell, colour and even temperature of the corpse flower are all meant to attract pollinators. He also informed that dung beetles, flesh flies, and other carnivorous insects are the primary pollinators of this type of flower. Since they eat dead flesh, so the foul odour and dark crimson colour of the corpse flower are to attract these insects.

The odour of the corpse flower is provided by several compounds like Dimethyl trisulphide (cooked onion-like odour); Dimethyl disulphide (garlic-like odour); Isovaleric acid (sweaty socks like odour); Benzyl alcohol (sweet floral odour); Phenol (medicinal and sweet odour), and Indole (naphthalene balls like odour).

The corpse flower is classified as "vulnerable" on the International Union for Conservation of Nature’s (IUCN) Red List of Threatened Plants. The main threat to its survival is habitat loss and destruction.

Today, the Sumatran rainforests are under major threat of deforestation as huge areas are logged for timber to clear space for palm plantations. In fact, it is estimated that around 72 percent of the original rainforests in Indonesia have been cleared out and the scale of deforestation continues at a disturbing rate.