

NECKLACE OF SPOROPHORE: A LESS SEEN PHENOMENON OF ROOT ROT PATHOGEN *GANODERMA LUCIDUM*

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Abstract – This short note reports a case study of a less seen phenomenon of producing sporophores around the tree collar region by *Ganoderma lucidum*, a root-decaying pathogenic fungus that often kill and severely weakens the structural stability of trees.

Ganoderma lucidum (Curtis) P. Karst. belongs to Ganodermataceae family of the order Polyporales in the class Agaricomycetes (Moncalvo *et al.*, 1997). *G. lucidum*, a pathogenic fungus, causes root rot in trees, a condition that severely weakens and often kills its host. This fungal species primarily infects the roots of a tree, spreading through the soil and decaying the woody tissues. As the infection progresses, the tree's ability to absorb water and nutrients diminishes which results in die-back or stag-head symptoms where tree starts declining from the top and proceed downwards, leading to structural instability and eventual collapse. Visibly, the disease manifests in the form of fruiting bodies, or conks, which are shelf-like growths that emerge at the base of the tree. These conks have a distinctive reddish-brown color with a glossy appearance and are a hallmark sign of *G. lucidum* infection. Below ground, the tree's roots rot and break down, sometimes going unnoticed until significant damage has occurred (Adaskaveg and Gilbertson 1989; Schwarze *et al.*, 2000). While *G. lucidum* is also known for its medicinal uses in traditional practices (Zhao *et al.*, 2023), it poses a serious threat to tree populations in urban and forest environments (Schwarze *et al.*, 2000).

In the present case study, a less seen phenomenon of producing *G. lucidum* sporophores around the tree collar region is being reported from

Jawahar Lal Nehru Park in Custom House, Raigarh, Maharashtra (Coordinates: 18°55'23.4''N, 72°58'24.5''E; Date:17.10.2024). The encircling of sporophores around the whole tree collar region gives an appearance of 'necklace' where beads are in circle around neck. It is colloquially called as "Necklace of Sporophore" (Fig. 1). The affected tree was about 10 year old *Casia fistula* and at the time of observation the tree was completely dry. There were 16 fused sporophores or caps supported by about 80 branched stipes including fused stipes and 16 main stipes giving it an appearance of roof supported by pillars or crown of a tree supported by branches (Fig. 2). The circumference of the encircling sporophores was about 190 cm. (from outer core,



Fig. 1. 'Necklace of Sporophore' of *G. lucidum*



Fig. 2. Underneath view of cap and stipe

including tree girth)

Such trees which are infected with *G. lucidum* should be evaluated for their stability, so that

potential hazards in both urban and forest ecosystems can be prevented.

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