

Ophiocordyceps Nutans Fungi

 drishtiias.com/printpdf/ophiocordyceps-nutans-fungi

Why in News

Recently, researchers have found *Ophiocordyceps nutans* (fungi) for the first time in **central India**, while setting out on a plant survey at the **Kanger Valley National Park** in **Bastar, Chhattisgarh**.

Earlier, these have been reported in India only from the **Western Ghats**.

Key Points

- *Ophiocordyceps nutans* host on a specific insect, *Halyomorpha halys*.
 - *Halyomorpha halys* is commonly known as the **stink bug** and is a **pest to forest trees and agricultural crops**.
 - The stink bug is known to **damage the flower and fruits** of soybean, green beans, apple, pear, etc.



- **Mechanism:**

- The fungi infect the insect when alive and develop **fungal mycelium** (the vegetative part of a fungus) inside its **thorax** (chest).
- The **spores** (single-celled reproductive units) **sprout out** from between the insect's thorax and head, **killing the insect** but it continues to take nutrition from the dead body.
- The fungi are very **host-specific**, so the spores travel and infect stink bugs only.

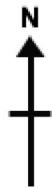
- **Importance:**

- Studies have shown that these fungi can be **used as a biological pest control agent** against the stink bugs.
 - Exploring these fungi as a pesticide will help **reduce the harmful effect of chemicals** in fields.
- Several species of the Ophiocordyceps fungi have **medicinal properties**.
 - Reports show that **China has been traditionally using** it.
 - In the **Western Ghats**, the local people use these fungi as an **immune stimulator**.
- These are rich in **biologically active metabolites, vitamin C, phenolic compounds** (disinfectant in household cleaners), and also have **anti-inflammatory** and **antioxidant properties**.
- Scientists claim that it contains a component called '**cordycepin**' which has **anti-cancer properties**.

Kanger Valley National Park

- It derives its name from the **Kanger River**, which flows centrally from northwest to southeast direction. Kanger River is among one of the very few **perennial rivers** of Bastar.
- Kanger Valley got the **status of a national park in 1982**.
- With a total area of **200 sq. km.**, the park is a typical **mixed humid deciduous** type of forest, in which the Sal, Saugaun, teak and bamboo trees are available in abundance.
- The most popular species in this area is the **state bird of Chattisgarh, Bastar Hill Myna** which is capable of emulating the human voices. The forest is home to other migrant and resident birds as well.
- The park is home to **three exceptional caves, Kutumbasar, Kailash and Dandak**, famous for their geological structures of **stalagmites and stalactites**. It is also known for the presence of **underground limestone caves**.

National Parks & Sanctuaries of Chhattisgarh



Map not to Scale

	State Capital
	National Parks
	National Highway
	Sanctuaries
	International Boundary

Source: TH