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## Ophiocordyceps Nutans Fungi

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### 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



Source: TH