



Black Aspergillus in Western Ghats

[Source: PIB](#)

Scientists have discovered **two new species of black aspergillus (*Aspergillus dhakephalkarii* and *Aspergillus patriciawiltshireae*)**, from the **Western Ghats**, marking India's first study in this group using advanced polyphasic taxonomy.

- The **Western Ghats** is a **UNESCO World Heritage site** and one of the **eight "hottest hotspots"** of biodiversity.

Black Aspergillus

- It comprises a diverse group of **filamentous fungi** that are **ubiquitously distributed across various ecological niches** and are of considerable **medical, industrial, and ecological significance**.
- Also known as '**workhorses of industrial application**' especially in citric acid production, food mycology, fermentation technology, and agriculture.

World's 8 'Hottest Biodiversity Hotspots

- There are 8 recognized "hottest hotspots" due to their exceptional species richness and endemism.
 - **Madagascar** – 90% of wildlife found nowhere else on Earth; home to lemurs, chameleons, baobab trees.
 - **Philippines** – Over 52,000 species; rich rainforests, coral reefs, and mangroves; includes Philippine eagle, tarsier.
 - **Sundaland (SE Asia)** – **Oldest tropical rainforests**; orangutan, Sumatran tiger, pygmy elephant.
 - **Brazil's Atlantic Forests** – Only ~12% remains; golden lion tamarin, sloth, diverse plants.
 - **Caribbean Islands** – 7,000+ islands; tropical forests, reefs, mangroves; unique birds, reptiles, amphibians.
 - **Indo-Burma Region** – NE India to Vietnam; saola, highly endangered.
 - **Western Ghats & Sri Lanka** – Endemics like lion-tailed macaque, Nilgiri tahr, Sri Lankan leopard.
 - **Eastern Arc & Coastal Forests (Tanzania & Kenya)** – Ancient forests, endemic owls, colobus monkeys, unique plants.

Biodiversity Hotspots in India

Himalayas

- The **youngest and highest mountain chain** on Earth, **stretches in an arc across** northern Pakistan; Nepal; Bhutan; the northwestern and northeastern states of India adjoining Myanmar; and the southwest China border in the east.
- Home to important populations of numerous large bird and mammal species, including vultures, tigers, rhinos and wild water buffalo.
- Many unique and diverse human groups are also found here. **Nepal** counts more than 27 ethnic groups, **either of Tibetan-Burmese or Indo-Aryan descent**, while **Bhutan has three main ethnic groups—the Ngalongs, Sharchogpas and Lhotsampas**. The northeast part of India, meanwhile, has more than 500 distinct ethnic groups.

Western Ghats and Sri Lanka

- Western Ghats, a **biogeographically important formation of the Gondwanaland**, is formed of the Malabar plains and the chain of mountains running parallel to India's west coast, about 30 to 50 km inland.
- The Western Ghats **indigenously known as 'Sahyadri'**, starts downwards from the Tapi River in Gujarat to the country's southernmost tip Kanyakumari in Tamil Nadu.
- It is interrupted by a number of natural gaps and passes, and the **widest being the Palakkad (Palghat) Gap**.
- The Agasthyamalai hills, Nilgiris, Anamalai hills, Palani hills, Meghamalai, Cardamom hills, Silent Valley- New Amarambalam forests, Wyanad-Kodagu, Shimoga-Kanara, Konkan and Mahabaleshwar-Khandala are some of chief centres of plant diversity and endemism in the Western Ghats.
- The 'Western Ghats' is a **world heritage site**.
- Sri Lanka is a continental island **separated from southern India by the 20-meter-deep Palk Strait**.

Indo-Burma

- Covers Myanmar, Thailand, Cambodia, Vietnam, Laos PDR and includes the Gangetic plains, areas around the Brahmaputra River and parts of Andaman and Nicobar Islands.
- The **limestone karst formations** that are found throughout the hotspot support highly unique ecosystems, with high levels of endemism, particularly among plants, reptiles and molluscs.

Sundaland

- Politically, the hotspot **covers** a small portion of southern Thailand; nearly all of Malaysia; Singapore; Brunei; and the western half of Indonesia. The **Nicobar Islands**, which are under Indian jurisdiction, are also included. Interestingly, it extends to the tectonic plates under the Indian Ocean.
- The hotspot is **home to iconic species** like orangutans, pig-tailed langurs, Javan and Sumatran rhinos, and proboscis monkeys found only in Borneo.
- Sundaland also has the distinction of **being home to the world's largest flowers**, the rafflesia, which measure one metre across.

FACTS

- The term 'biodiversity hotspot' was **coined by Norman Myers (1988)**.
- The **Conservation International** (non-profit organization) in association with Myers made the first systematic update of the hotspots.
- There are **currently 36 recognized biodiversity hotspots**. To qualify as a biodiversity hotspot, an area **must meet two strict criteria**:
 - Contain at least 1,500 species of vascular plants found nowhere else on Earth (known as "endemic" species).
 - Have lost at least 70 percent of its primary native vegetation.
- **Biodiversity Hotspots in India (4):** The Himalayas, The Western Ghats and Sri Lanka, The Indo-Burma and The Sundaland.

Read more: [New Species of Plants and Animals Discovered](#)