



The Palghat Gap

Why in News?

Often called as a significant discontinuity in the [Western Ghats](#), the [Palghat Gap](#) is a geographical marvel spanning approximately 40 km in width, **separating the Nilgiris and Anamalai hills**, both towering above **2,000 meters above sea level**.



What is the Significance of Palghat Gap?

- **Origin and Formation:** The Palghat Gap originated due to the **drift of continental shelves** after the **separation of Australia and Africa** from the [Gondwana landmass](#).
 - The **splitting of India and Madagascar** led to the formation of the Gap approximately 100 million years ago.
- **Vegetation:** In contrast to the tropical rainforests of the Western Ghats, the vegetation in the Palghat Gap is classified as **dry evergreen forest**.
- **Significance:**
 - **Historical:**
 - **Gateway to Kerala:** The Palghat Gap has historically served as a vital entry point into Kerala, **facilitating both road and rail transportation between Coimbatore and Palakkad**.
 - **Also**, the [Bharathappuzha river](#) **flows** through the Palghat Gap, enhancing its importance as a transportation route.
 - **Geographical:**
 - **Shear Zone:** The Palghat Gap is a geological shear zone, **running from east to**

west, which represents a weak region in the earth's crust.

- This geological characteristic can explain **occasional tremors** experienced in the Coimbatore region.

- **Climate:** While the **Western Ghats north of the Palghat Gap receive more annual rainfall**, the **southern region experiences more evenly distributed rainfall** throughout the year.

- **Ecological:**

- **Biogeographic Distinctions:** The distinct flora and fauna on either side of the Palghat Gap are believed to be a **consequence of ancient river systems or past incursions of the sea**.
- **Genetic Variations:** Genetic studies have revealed differences in the [mitochondrial DNA](#) of **elephant populations** residing on the Nilgiris side compared to those in the Anamalai and Periyar sanctuaries.
- **Bird Species Variation:** Research conducted by IISc Bangalore highlighted genetic divergence in the **White-bellied Shortwing**, an endemic and threatened bird species.
 - The **Nilgiri blue robin and White-bellied blue robin** populations exhibit slight variations in appearance based on their location around **Ooty and the Anamalai hills**.
- **Species Richness and Phylogenetic Diversity:** A recent study conducted by groups from CCMB at Hyderabad and other institutions revealed that the southern region of the Western Ghats, located south of the Palghat Gap, **boasts abundant species richness and phylogenetic diversity**.
 - This region is home to more than **450 tree species**, including ancient species like **Magnolia champaca** (Champa; Tamil: Sambagan), which have **thrived for over 130 million years**.

- **Other Gaps:**

- **Thalghat (Mumbai and Nashik)**
- **Bhorghat (Mumbai and Pune)**

UPSC Civil Services Examination Previous Year Question (PYQ)

Q. 'Gadgil Committee Report' and 'Kasturirangan Committee Report', sometimes seen in the news, are related to (2016)

- (a) constitutional reforms
- (b) Ganga Action Plan
- (c) linking of rivers
- (d) protection of Western Ghats

Ans: (d)

Source: TH