



# Dicliptera Polymorpha

[Source: PIB](#)

## Why in News?

Recently, Scientists from the **Agharkar Research Institute (ARI)**, an autonomous institute under the Department of Science & Technology (DST), have discovered a new species of **Dicliptera**, named **Dicliptera Polymorpha** in the Northern Western Ghats of India.

## What are the Key Findings Related to Species?

- **Unique Traits of *Dicliptera Polymorpha*:**
  - **Fire Resilience:** It can survive summer droughts and adapt to grassland fires.
  - **Dual Blooming Pattern:** Blooms post-monsoon (November–April) and again in May–June after fires.
  - **Morphological Distinction:** It has inflorescence flower structures that are uncommon in Indian species but similar to those found in African species.
  - **Adaptations to Harsh Conditions:**
    - Thrives on open grassland slopes in the Western Ghats.
    - Woody rootstocks produce dwarf flowering shoots during the second flowering phase.
- **Threats to Species:**
  - **Human-Induced Fires:** While fires can help the species bloom again, too many or poorly controlled fires could harm its habitat.
  - **Habitat Overuse:** Overgrazing and land-use changes threaten grassland biodiversity.

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## *Dicliptera polymorpha* Dharap, Shigwan & Datar



### What are Key Facts About the Western Ghats?

#### ▪ About:

- The [Western Ghats](#), also known as the **Sahyadri Hills**, are well known for their rich and unique assemblage of flora and fauna.
- The range is called Sahyadri in northern Maharashtra, Nilgiri hills in Karnataka and Tamil Nadu and **Anaimalai hills and Cardamom hills in Kerala**.
- It is recognized as a [UNESCO World Heritage Site](#).
- Western Ghats is home to India's two biosphere reserves, **13 National parks**, several wildlife sanctuaries and many Reserve Forests.
  - It comprised the evergreen forests of [Nagarahole](#), deciduous forests of [Bandipur National Park](#) and Nugu in Karnataka and adjoining regions of [Wayanad and Mudumalai National Park](#) in the states of Kerala and Tamil Nadu.

#### ▪ Global Biodiversity Hotspot:

- One of India's four recognized biodiversity hotspots, it is home to many endemic and yet-to-be-discovered species.

#### ▪ Grassland Ecosystems:

- Grasslands support unique flora and fauna, many of which are fire-adapted.
- Habitat for rare and endangered species, essential for ecological balance.

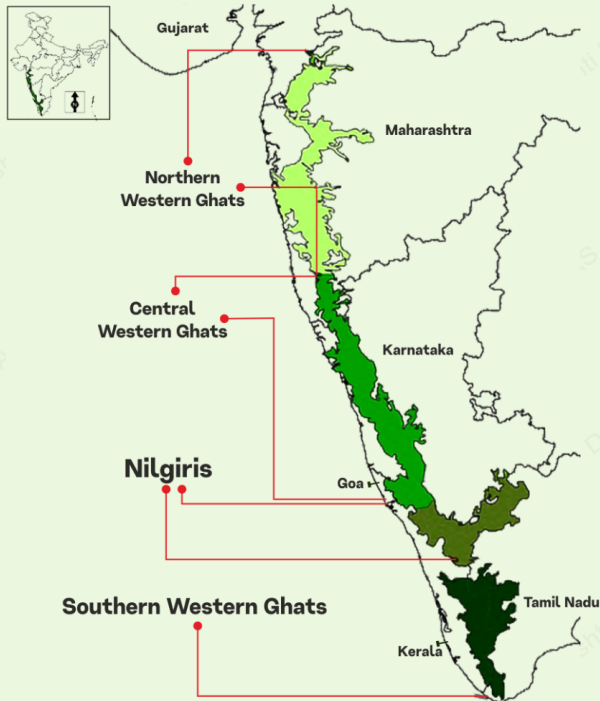
#### ▪ Conservation Efforts for Western Ghats:

- **Gadgil Committee (2011):**
  - It is also known as the [Western Ghats Ecology Expert Panel \(WGEEP\)](#).
  - The committee recommended that all of the Western Ghats be declared as the [Ecological Sensitive Areas \(ESA\)](#) with only limited development allowed in graded zones.
- **Kasturirangan Committee (2013):** It sought to balance the development and environment protection in contrast to the system proposed by the Gadgil report.
  - The [Kasturirangan committee](#) recommended that instead of the total area of

Western Ghats, **only 37%** of the total area should be brought under ESA and a complete ban on mining, quarrying and sand mining be imposed in ESA.

# Western Ghats

One of the four biodiversity hotspots of India; recognised as a UNESCO WHS (2012)



## Rivers (originating)

- West-flowing: Periyar, Bharathappuzha, Netravati, Sharavathi, Mandovi
- East-flowing: Godavari, Krishna, Kaveri, Tunga, Bhadra, Bhima, Malaprabha, Ghataprabha, Hemavathi, Kabini

## Endemic Species

- Nilgiri tahr (IUCN Status - EN)
- Lion-tailed macaque (IUCN Status - EN)

## Imp Protected Areas

- Biosphere Reserves - Agasthyamala and Nilgiri
- NP - Silent Valley, Bandipur, Eravikulam, Wayanad-Mudumalai, Nagarhole
- TR - Kalakad-Mundanthurai, Periyar

## Imp Passes

- Thal Ghat Pass (Kasara Ghat)
- Bhor Ghat Pass
- Palakkad Gap (Pal Ghat)
- Amba Ghat Pass
- Naneghat Pass
- Amboli Ghat Pass

## Significance

- Hydroelectricity production
- Influences Indian monsoon weather patterns
- Carbon sequestration (neutralise ~4 MT of carbon every year)
- One of the 8 global hottest hotspots of biodiversity (due to richness in species and endemism)
- Rich in iron, manganese and bauxite ores, timber, pepper, cardamom, oil palm and rubber
- Sizeable indigenous population (including PVTGs)
- Important tourism/pilgrimage centres

## Major Threats

- Mining, Industrialisation
- Massive extraction of forest produce
- Human-wildlife conflict, encroachment, illegal hunting
- Livestock grazing, deforestation
- Large hydropower projects
- Climate change

## Imp Committees

- Gadgil Committee (2011) (Western Ghats Ecology Expert Panel)
  - Recommendation: All of WG be declared as Ecological Sensitive Area (ESA) with only limited development allowed in graded zones.
- Kasturirangan Committee (2013)
  - Recommendation: Instead of whole, only 37% of the total area of WG be brought under ESA + complete ban on mining, quarrying and sand mining be imposed in ESA.

## Names

- Sahyadri - northern Maharashtra; Sahya Parvatham - Kerala

## Diverted views about Mt. type

- View 1: Block Mt. formed due to down warping of a part of land into Arabian Sea
- View 2: Not true mt. rather the faulted edge of Deccan Plateau

## Major Rocks

- Basalt, granite gneiss, khondalites, metamorphic gneisses, crystalline limestone, iron ore

## Geographical Extent

- Satpura (in north) to the end of TN at Kanyakumari (in south)

## Mt. Ranges

- Niligiri ranges, Shevaroys and Tirumala range
- Highest peak - Anamudi (Kerala)



## UPSC Civil Services Examination, Previous Year Questions (PYQs)

### Prelims:

Q. Recently, our scientists have discovered a new and distinct species of banana plant which attains a height of about 11 meters and has orange coloured fruit pulp. In which part of India has it been discovered? (2016)

- (a) Andaman Islands

(b) Anaimalai Forests

(c) Maikala Hills

(d) Tropical rain forests of northeast

**Ans: (a)**

PDF Reference URL: <https://www.drishtiias.com/printpdf/dicliptera-polymorpha>

