



## Wallace Line

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### Why in News?

In the 19<sup>th</sup> century, **Alfred Wallace** observed a **change in species composition** between **Asia and Australia**. This difference in species composition later developed as the **Wallace Line**.

### What is the Wallace Line?

- **About:** The Wallace Line is an **imaginary boundary** separating the distinct **faunal regions of Asia and Australia**.
  - It marks a major **biogeographical division** with stark species differences on either side of the line.
- **Geographical Location:** It runs through the **Makassar Strait**, which lies between the east coast of **Borneo** and the western coast of **Sulawesi**.
  - It extends between **Bali and Lombok**, separating the **Sunda and Sahul continental shelves**.



- **Species Distribution:** West of the Wallace Line (**Bali, Borneo, Java, and mainland Asia**), fauna consists of **monkeys, apes, rhinos, squirrels, tigers, and hornbills**, which are characteristic of the Asian ecosystem.
  - **East of the Wallace Line (Lombok, Sulawesi, Timor, and Australia)**, fauna includes tree **kangaroos, cockatoos, and honeyeaters**, linked to the Australian ecosystem.
- **Wallacea Region:** The region between the **Wallace Line and the Weber Line** (another faunal boundary to the east) is known as **Wallacea** and includes islands like **Sulawesi, Flores, Lombok, and Timor**.
  - Isolated Wallacean islands have **lower biodiversity** than nearby continents but host **unique species** like the **Komodo dragon, babirusa, and giant bees**.
  - Sulawesi is home to **both Asian species** like tarsiers and anoas, and **Australian marsupials** like the dwarf cuscus.
- **Reason for Formation:**
  - **Continental Drift:** About **85 million years ago**, Australia **separated** from Antarctica and **drifted** northward, **isolating species** and driving independent evolution.
  - **Deep Oceanic Barriers:** It aligns with deep waters like the **Makassar Strait**, which remained **submerged** even during **ice ages**, **limiting species movement** between Asia and Australia.
  - **Geological Climate Change:** **Asian and Australian species**, suited to their respective climate, struggled **to migrate either side of the line**.

## UPSC Civil Services Examination, Previous Year Question (PYQ)

### Prelims

**Q. Which one of the following pairs of islands is separated from each other by the 'Ten Degree Channel'? (2014)**

- (a) Andaman and Nicobar
- (b) Nicobar and Sumatra
- (c) Maldives and Lakshadweep
- (d) Sumatra and Java

**Ans: (a)**

**Q. Consider the following statements: (2010)**

1. Biodiversity hotspots are located only in tropical regions.
2. India has four biodiversity hotspots i.e., Eastern Himalayas, Western Himalayas, Western Ghats and Andaman and Nicobar Islands.

**Which of the statements given above is/are correct?**

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Ans: (d)**

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