



Wallace Line

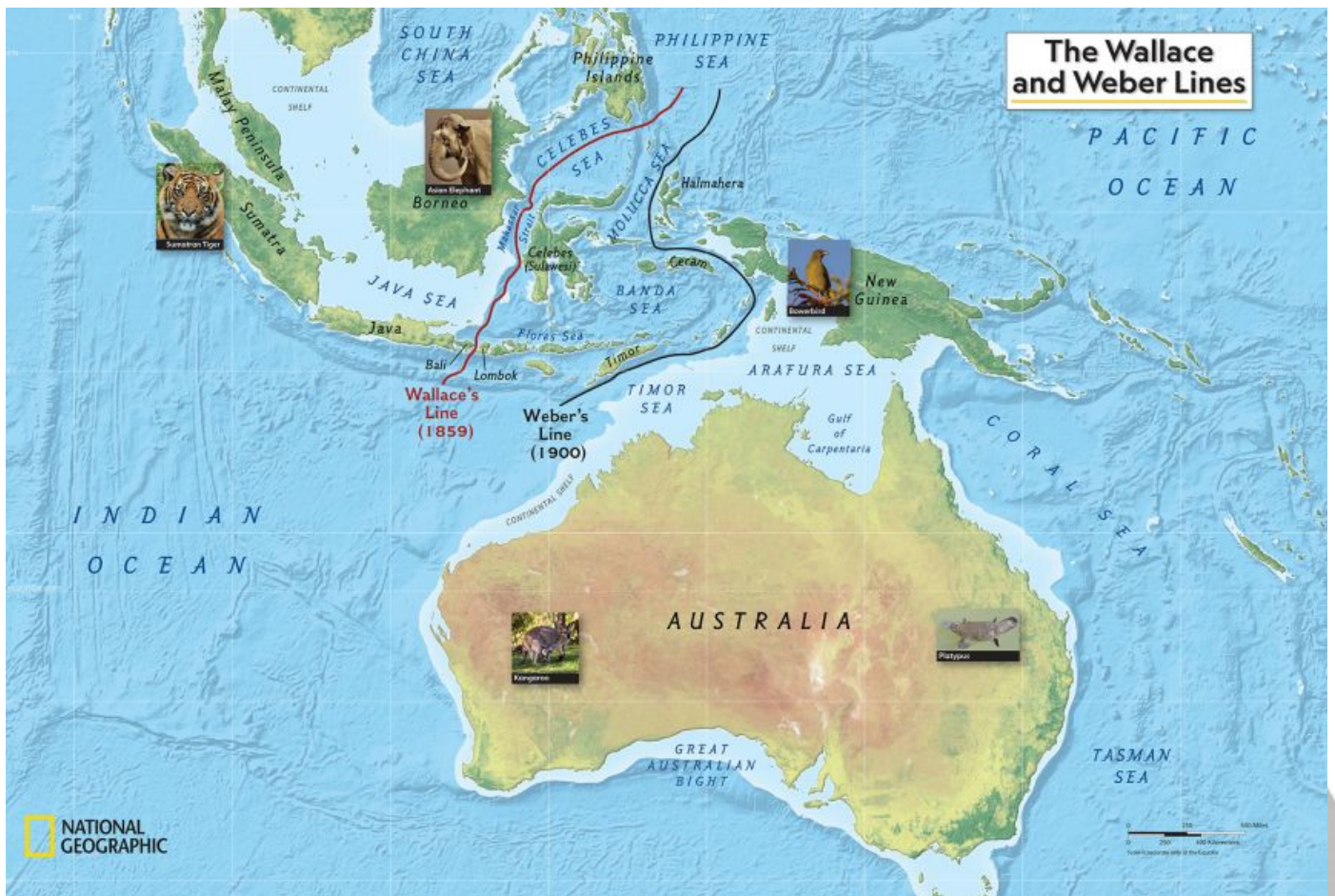
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Why in News?

In the 19th 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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