



Cicadas

[Source: NYT](#)

Why in News?

In a rare occurrence, a trillion [cicadas](#) from two different broods are expected to begin appearing in the **Midwest and Southeast regions** of the **US** at the end of April, 2024.

What are Cicadas?

▪ About:

- [Cicadas](#) are [insects](#) that belong to the order Hemiptera and the superfamily Cicadoidea.
 - Hemipteran insects, also called true bugs, have mouthparts used for piercing and sucking and have two pairs of wings.
- They spend most of their lives **underground** and emerge from the [soil](#) **mainly to mate**. Once out of the ground, their **life span** is **fairly short**, somewhere between two to four weeks.

▪ Habitat:

- Most cicadas are canopy dwellers and are found in natural forests with large trees; found in every continent except Antarctica.
 - The **genetic diversity** of cicadas in **India and Bangladesh** ranks the highest globally, followed by China.

▪ Emergence:

- Cicadas have complex life cycles that involve long periods of underground development and short periods of adult emergence.
 - There are **three species** of cicadas that emerge every **17 years** and three species that emerge every **13 years**.
- Originally, **30 broods** of periodical cicadas were categorised based on geography and emergence times, but currently, only about **15 broods** remain active due to some becoming extinct.

▪ Features:

- Researchers suspect that the **lengthy development period** of cicadas, during which they feed on plant sap underground, may be related to their **evasion of above-ground predators**, before emerging to construct a "**cicada hut**" and climb onto nearby trees or vegetation.
- The adult cicadas are **vulnerable to predators** such as [turtles](#) and other forest inhabitants because they are **clumsy and lack defences**, making them virtually **easy prey**.

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What Happens When Cicadas Emerge?

▪ Mechanism:

- After emerging from the ground in **massive numbers**, cicadas **shed** their **exoskeletons** to transform into their **winged form**, often leaving the discarded exoskeletons attached to **tree trunks** and twigs.
- **Adult cicadas** live for a **short span** of two to four weeks, during which they eat little, mate, and produce a loud collective chorus of up to 100 decibels to **attract females**.

▪ Significance:

- In urban areas, cicada bodies can be utilised as **free fertiliser** for gardens and natural areas.
 - They act as **natural tree gardeners** and benefit the environment by **aerating** the **soil** with the holes they leave behind when emerging, facilitating **rainwater absorption** to nourish tree roots during hot summer months.
- The slits made by **cicadas** in trees can cause branches to break, leading to "**flagging**," a **natural pruning process**, and when the branches regrow, they tend to produce larger fruits, while the cicadas' decomposing bodies provide nutrients for the trees.