

## Prelim Bits 03-04-2024 | UPSC Daily Current Affairs

### Butterfly Cicada

*A New species of cicada was recently discovered in Meghalaya, marking the first-ever record of the genus in India.*

- The Cicada species is informally dubbed the “Butterfly Cicada,” with the species name “bicolour” reflecting its two distinct colour forms.
- **Genus** - Becquartina.
  - The new species brings the total number of known species in the genus Becquartina to 7.
  - The cicada genus Becquartina is represented by 6 species found distributed in China, Thailand, and Vietnam.
  - It is endemic to Garo Hills and in a community forest in Ri-Bhoi, Meghalaya.



### Cicada

- Cicadas, family (Cicadidae) is a group of insects that are known for their loud buzzing and clicking noises, use different calls to express alarm or attract mates.
- Cicadas are herbivores that feed on liquids rather than solid material.

- **Occurrence**- Cicadas are found in *tropical and temperate areas worldwide* and occur in deserts, grasslands, and forests.
- **India**-In 2017, the cicada was first found in and around the plateau of *Balpakram National Park* of South Garo Hills District of *Meghalaya*.
- In 2020 it was found in *Nongkhrach community forest* in Ri-Bhoi district of Meghalaya.
- Cicadas are divided into 2 groups - annual and periodical.

Annual cicadas	Periodical cicadas
• It emerge from the ground at different times each summer.	• It emerge from the ground at the same time, after a dormant period of either 13 or 17 years are called broods.
• It can be found throughout the world	• It is unique to North America.

## References


1. [The Shillong Times | Butterfly Cicada](#)
2. [National Geographic | Cicadas](#)
3. [Britannica | Cicada](#)

## Pangolin

*Pangolins face rapid declines across Asia and Africa, with all 8 species classified as vulnerable, endangered, or critically endangered.*

- **About** - Pangolins are mammals covered in scales, also known as ***scaly anteaters***, that eat ants, termites, and larvae, essential players in controlling insect populations within their ecosystems.
- These animals are ***insectivores***, they have no teeth, so they use their sticky tongues to pick up food.
- **Habitat** - Pangolins are ***solitary, nocturnal animals*** that live in forests and grasslands.
- **Uniqueness** - They are the ***only mammals wholly-covered in keratin scales*** and they use those scales to protect themselves from predators in the wild.
- The name “pangolin” originates from the Malay word *pengguling*, which translates to “rolling up”.
- **Types**
  - **4 Asian species** - Chinese, Sunda, Indian, and Philippine pangolins.
  - **4 African species** - Temminck's Pangolin, giant pangolin, white-

bellied, and black-bellied.

<b>Conservation status</b>		
<b>IUCN Red List</b>	<b>Critically Endangered</b> - Philippine Pangolin, Sunda Pangolin, Chinese Pangolin.	
	<b>Vulnerable</b> - Temminck's Pangolin, Black-bellied Pangolin.	
	<b>Endangered</b> - Indian Pangolin, White-bellied Pangolin, Giant Pangolin.	
<b>CITES</b>	Appendix I	
<b>Wild Life (Protection) Act, 1972.</b>	The Indian Pangolin and Chinese Pangolin are listed in <b>Schedule-I</b>	

- **Threat** - They are one of the most trafficked mammals for their meat, and the organs, skin, scales, and other parts of the body in Asia and Africa for traditional medicines.

## References

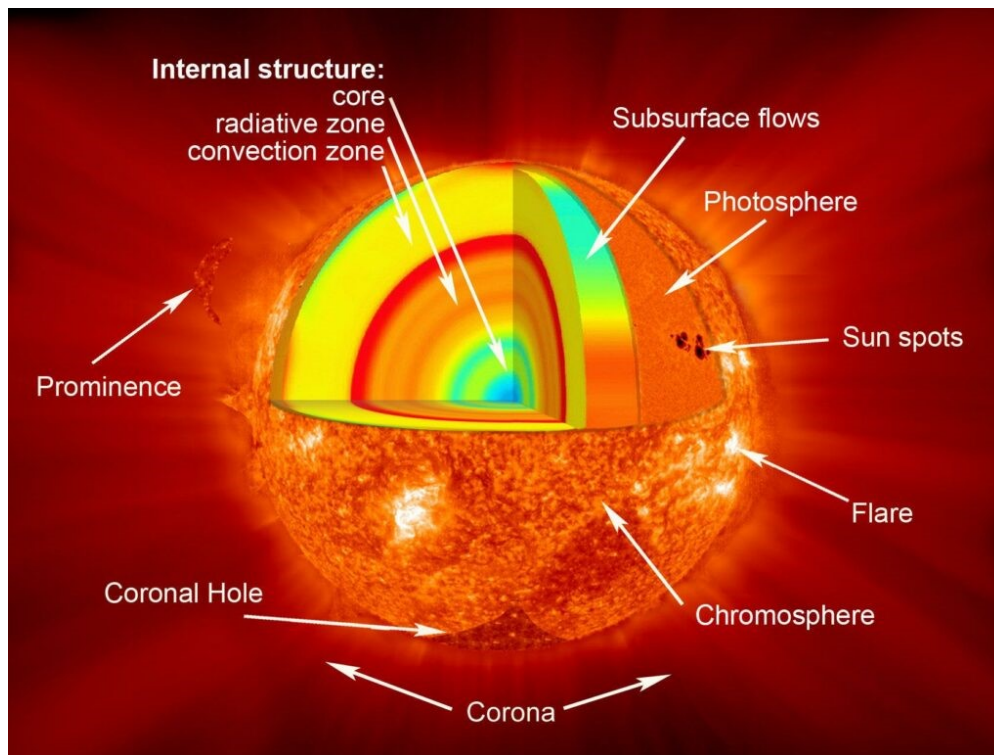
1. [Down to Earth | Pangolins](#)
2. [National Geographic | Pangolins](#)
3. [World Wildlife | Pangolin](#)

## Layers of Sun

*The upcoming solar eclipse provides a rare opportunity to witness the sun's superhot corona.*

- The Sun and its atmosphere consist of several zones or layers. From the inside out, the solar interior consists of:
  - **The Core** - The central region where nuclear reactions consume hydrogen to form helium through the nuclear fusion reaction.
  - These reactions release the energy that ultimately leaves the surface as visible light.
  - **The Radiative Zone** - It extends outward from the core to the convection zone, characterized by the method of energy transport radiation in the form of electromagnetic radiation by photons.
  - **The Convection Zone** - The outermost layer of the solar interior

extending from a depth of about 200,000 km to the visible surface where its motion is seen as granules and supergranules.



## Solar Atmosphere

- **The Photosphere** - It is the deepest visible surface of the Sun.
- **The Chromosphere** - It is an irregular layer above the photosphere where the temperature rises from 6000°C to about 20,000°C.
- **Transition Region** - It is a thin and very irregular layer of the Sun's atmosphere that separates the hot corona from the much cooler chromosphere.
- **The Corona** - The Sun's outer atmosphere, it cannot be seen with the naked eye except during a total solar eclipse, or with the use of a coronagraph.
- **Solar Wind** - Beyond the corona is the solar wind, which is actually an outward flow of coronal gas.
- The Sun's magnetic fields rise through the convection zone and erupt through the photosphere into the chromosphere and corona.
- The eruptions lead to solar activity, which includes such phenomena as sunspots, flares, prominences, and coronal mass ejections.

## References

1. [Down to Earth | Sun's Corona](#)



## PM-SUMAN Scheme

- **PM-SUMAN** - Prime Minister Surakshit Matritva Aashwasan (SUMAN) - 'An Initiative for Zero Preventable Maternal and Newborn Deaths'.
- It is a ***maternity benefit program*** that provides affordable healthcare services ***to pregnant women and newborns.***
- **Launched by** - Ministry of Union Health and Family Welfare (MoHFW) in 2019.
- **Eligibility**
  - **Pregnant women** - Pregnant women from all categories, including APL and BPL, are eligible to get the benefits.
  - **Newborns** - Newborns aged ***0 to 6 months*** old will be able to avail the benefits of this scheme.
  - **Lactating mothers** - After delivery, lactating mothers up to 6 months from delivery are also eligible for this scheme.
- **Objectives**
  - This scheme offers zero expenses and access to detection and management of complications ***during and after pregnancy.***
  - Pregnant women can avail a ***zero-expense delivery and C-section facility*** at public health facilities.
  - It ensures zero-tolerance for denial of services to children and pregnant women.
  - Pregnant women also receive free transport from home to the health facility and drop back after discharge (minimum 48hrs).
  - Facilities such as services for sick newborns and neonates are offered vaccination at zero cost.

*The average annual rate of reduction (ARR) of Maternal Mortality in India is 6.36% and globally by 2.07%. The sustainable development goal (SDG 3) is to reduce the global MMR to less than 70 per 100,000 live births by 2030.*

## References

1. [Vikaspedia | Surakshit Matritva Aashwasan](#)
2. [Myscheme | SUMAN](#)
3. [MoHFW | SURAKSHIT MATRITVA AASHWASAN](#)

*Muslims across the world gear up for tarawih after the crescent moon is seen in several Indian cities recently.*

- Tarawih also known as taraweeh is a ***special kind of prayer*** (voluntary) that involves reading long parts of the Quran and performing many rakahs (cycles of prostrations required in Islamic prayer) during the Islamic month of Ramadan.
- The word 'taraweeh' is derived from the Arabic word meaning '***to rest and relax***'.
- Tarawih performed following the evening's final daily prayer (Isha), one of the highlights of Ramadan nights.
- The origins of this prayer can be traced back to the ***last year of the Prophet Mohammed's life***.
- Initially, people prayed tarawih individually or in small groups from Caliph Abu Bakr to the start of Caliph Omar's time.
- Later, Caliph Omar led everyone behind one imam and they prayed 8 rakats.
- The number of rakats eventually increased to 20 to make it easier. According to a Hadith, tarawih prayer includes 8 rakats, with each set consisting of 2 rakats like regular salah.
- However, the inhabitants of Medina recited the tarawih for 36 rakats under the reign of Caliph Omar bin Abdulaziz.
- There are many rewards for praying taraweeh, including the ***forgiveness of previous sins***.

## References

1. [DNA India | Taraweeh](#)
2. [Islamestic | Taraweeh](#)
3. [Islamic Relief Canada | Taraweeh](#)