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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 *Nongkhrah community forest* in Ri-Bhoi districtof 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.

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

- **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
2. NASA | Layers of Sun

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

Tarawih

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

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