

April - 16


## TNPSC BITS

- ❖ Indian-American actor and 'Mean Girls' star Avantika Vandanapu was named the South Asian Person of the Year by Harvard University.
- ❖ The French automaker Citroën achieves a milestone by exporting 500 units of the Made-in-India ë-C3 electric vehicle to Indonesia.
  - It is marking the first instance of a multinational carmaker exporting EVs from India.
- ❖ International Special Librarians Day is observed annually on April 13 to appreciate the contribution of the special librarians and their impact on the knowledge management.

## TAMIL NADU

### Mange Disease Among Dogs

# WHAT IS MANGE?



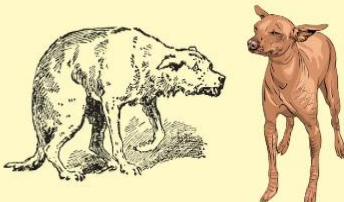
Mange is a skin condition characterized by a mite infestation.

- Skin irritation
- Intense itching
- Redness
- Inflammation
- Hair loss

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It can quickly escalate severely if it is left untreated. It is often seen in:

- Strays
- Abused
- Neglected dogs



- ❖ The pack of Asiatic wild dogs, also known as dhole, are known to operate around Bokkapuram in Mudumalai Tiger Reserve (MTR).
- ❖ Three animals of the pack are believed to have been affected by mange, a type of skin disease caused by parasitic mites.

- ❖ Mange Disease is a skin disease of animals caused by mite infestations, characterized by inflammation, itching, thickening of the skin and hair loss.
- ❖ The most severe form of mange is caused by varieties of the mite *Sarcoptes scabiei*, which also causes human scabies.

## SCIENCE AND TECHNOLOGY

### 1<sup>st</sup> fractal molecule in nature

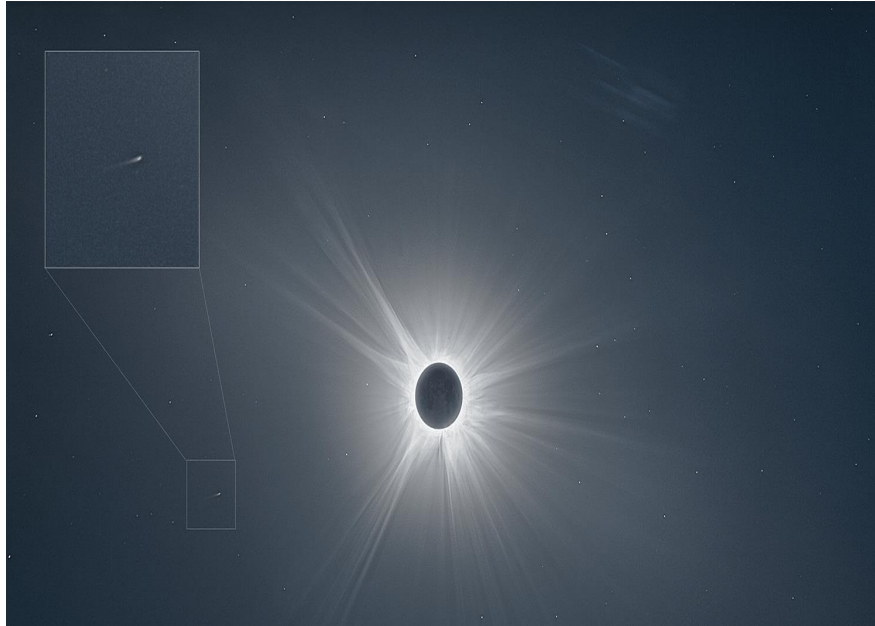
- ❖ International team of researchers discovered the first fractal molecule in nature.
- ❖ They discovered a microbial enzyme - citrate synthase from a cyanobacterium.
- ❖ It spontaneously assembles into a pattern known as the Sierpinski triangle.
- ❖ Their individual parts resemble the shape of the whole structure.
- ❖ Such shapes, which repeat from the largest to the smallest, are called fractals.
- ❖ Sierpiński triangle is an infinitely repeating series of triangles made up of smaller triangles.



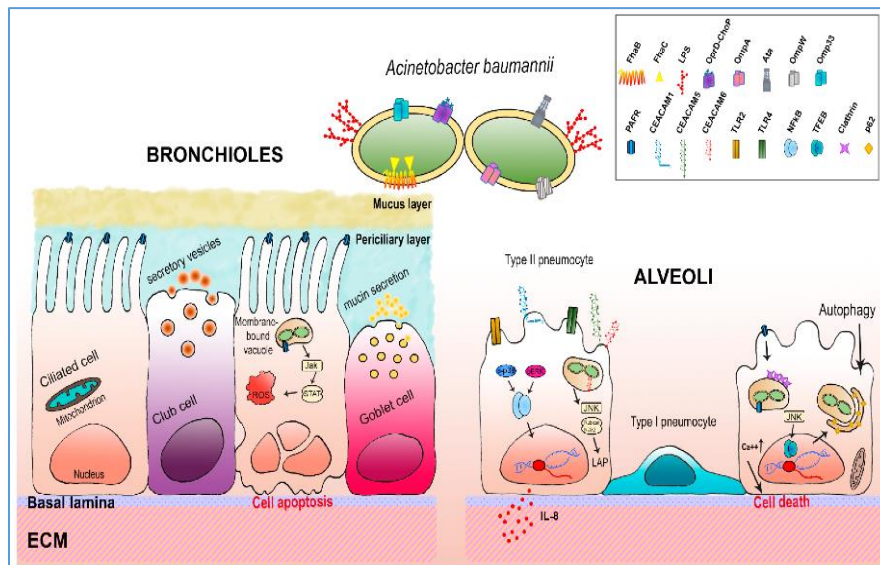
### Sun grazing Comets

- ❖ A tiny "sungrazer" comet, later named SOHO-5008, was discovered, photographed, and then destroyed within a span of 24 hours.

- ❖ Sungrazers are comets that come within about 5 million miles (8 million kilometers) of the sun, significantly closer than Mercury.
- ❖ They are mostly belonging to the Kreutz orbit group, originating from a giant comet that fragmented around 2,000 years ago.



## Zosurabalpin



- ❖ Researchers have identified a new class of antibiotics with the potential to tackle a drug-resistant bacterium, *Acinetobacter baumannii*.

- ❖ Zosurabalpin was found to be effective against CRAB (carbapenem-resistant *Acinetobacter baumannii*)-induced pneumonia and sepsis in mouse models.
- ❖ The bacteria, *Acinetobacter baumannii*, can cause serious infections in the lungs, urinary tract and blood.

## ENVIRONMENT

### Sardine Run

- ❖ Thousands of sardine fish have been surfacing near a beach in Goa.
- ❖ It's a "rare" phenomenon known as 'sardine run'.
- ❖ Shoals of the marine species are fluttering in shallow waters along the coast at Keri-Terekhol.
- ❖ The event is caused by the inflow of nutrients from the land due to the outflow of waters during the summer rainfall.
- ❖ Similar events were reported last year from Chavakkad and Malappuram and previously from Alappuzha in Kerala.



## REPORTS AND INDICES

### QS World University Rankings by Subject 2024

- ❖ Sixty-nine Indian universities made it to the rankings with 424 entries in the 2024 QS World University Rankings by Subject.

- ❖ The most represented Indian universities in this edition of the rankings are the University of Delhi (30 entries), IIT Bombay (28 entries) and IIT Kharagpur (27 entries).
- ❖ IIT Madras this year had 22 entries.
- ❖ India's highest-ranked university is Jawaharlal Nehru University for the Development Studies (20th globally, a new entry in this discipline).
- ❖ Saveetha Institute of Medical and Technical Sciences (deemed to be university) secured the 24th spot globally in Dentistry.
- ❖ It is the only Indian university to achieve a perfect score (100/100) in one of the QS indicators, namely the H Index.



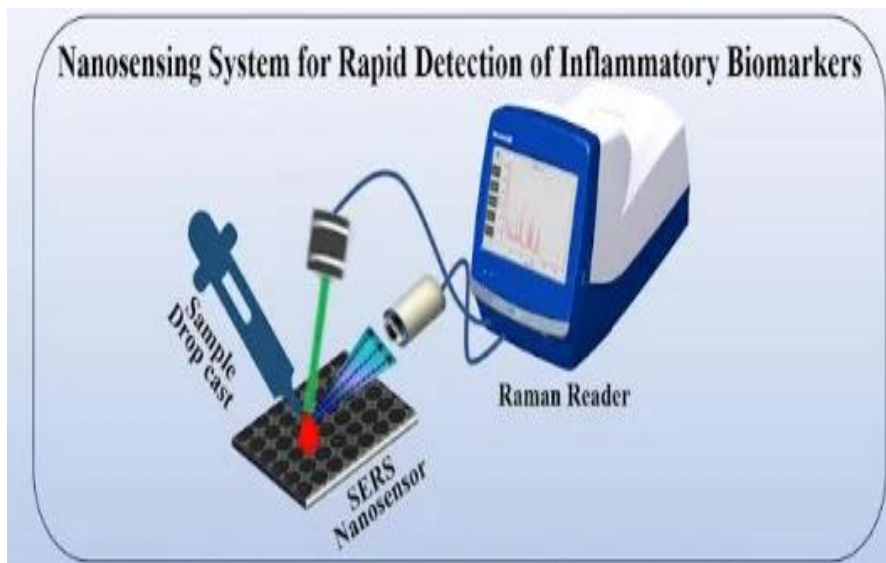
### **World Cybercrime Index**

- ❖ A new index ranking cybercrime threats by country has placed Russia at the top, highlighting a concentrated source of cybercriminals.
- ❖ Following Russia were Ukraine and China, with the United States is coming in fourth.
- ❖ The UK landed in eighth place, behind countries like Nigeria and Romania.
- ❖ The index placed India on the list at 10<sup>th</sup> rank.

- ❖ It is estimated that cybercrime costs the world around \$9.22 trillion in 2024, and this is expected to grow to \$13.82 trillion in 2028.



### Nano-Sensor for Disease Tracking



- ❖ IIT Jodhpur have introduced a human breath sensor designed for the alcohol detection and health monitoring.
- ❖ The sensor utilises metal oxides and nano-silicon, offering a cost-effective and non-invasive solution for various applications.

- ❖ The primary focus of the sensor is alcohol content measurement in breath, particularly in cases of drunk driving.
- ❖ But the device demonstrates the potential for characterising diseases such as asthma, diabetic ketoacidosis, chronic obstructive pulmonary disease, sleep apnea, and cardiac arrest.

## STATES

### Muria Tribes issues

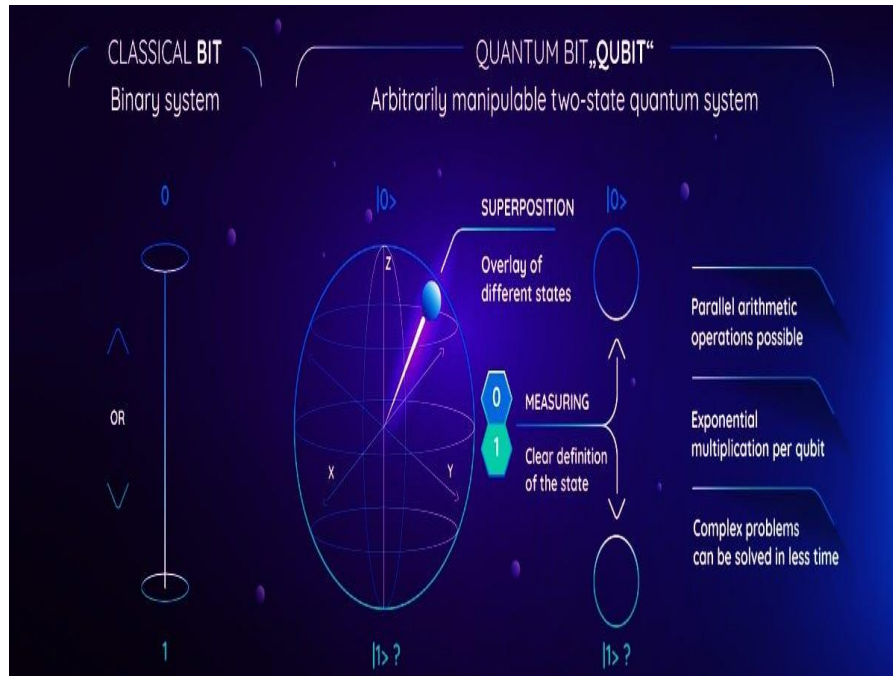


- ❖ The Murias, who fled from the districts of Sukma, Dantewada, and Bijapur in Dandakaranya region of Chhattisgarh, settled in the erstwhile East and West Godavari districts in Andhra Pradesh.
- ❖ The Muria settlements are known as habitations of Internally Displaced People (IDPs), whose population is around 6,600 in A.P.
- ❖ The Murias here referred to as 'Gutti Koyas' by the native tribes.
- ❖ The Murias have cleared forest cover within the reserve forests to raise food crops.
- ❖ That is the major issue raised by the Forest department for denying them any access to the basics.
- ❖ After a decade-long legal battle, some Muria settlements have managed to obtain a stay order.
- ❖ They fled from their native village in the Bastar region of Chhattisgarh during the conflict between left wing extremists and State-sponsored Salwa Judum, a wing designated to counter the Naxals.

- ❖ In the case of Nandini Sundar and Others vs. State of Chhattisgarh (July 2011), the Supreme Court declared the Salwa Judum unconstitutional and ordered the Chhattisgarh government to disband it immediately.

## IMPORTANT DAYS

### World Quantum Day 2024 - April 14



- ❖ It aims to promote the public's understanding of the Quantum Science and Technology.
- ❖ The date April 14 in 4.14 format represents the rounded first three digits of Planck's constant, a fundamental value in quantum physics.
- ❖ The value of Planck's constant is  $4.1356677 \times 10^{-15}$  eV·s.
- ❖ It is product of energy and time that is the fundamental constant governing quantum physics.


### B.R Ambedkar Jayanti 2024 - April 14

- ❖ The day marks the birth anniversary of Dr. BR Ambedkar.
- ❖ He was born on 14 April 1891, in Mhow (now Ambedkar Nagar) in Madhya Pradesh.
- ❖ The very first public celebration held in Pune on April 14, 1928.



- ❖ In 1990, Ambedkar was posthumously awarded the Bharat Ratna, India's highest civilian honor.
- ❖ Also, the period 1990-91 was declared as the "Year of Social Justice".

**BR Ambedkar**, popularly known as Babasaheb, was born on this day in 1891.  
A pick of his best words, which are still relevant



## AUTHOR OF INDIA'S CONSTITUTION

*"Cultivation of mind should be the ultimate aim of human existence"*

"I measure the progress of a community by the degree of progress which women have achieved"

"I like the religion that teaches liberty, equality and fraternity"

*"We are Indians, firstly and lastly"*

## MISCELLANEOUS

### Discovery of Giant Pliosaur Skull



- ❖ The gigantic skull of a prehistoric sea monster has been discovered in the cliffs of Dorset's Jurassic Coast in England.



- ❖ The skull belongs to a pliosaur, a marine reptile that lived around 150 million years ago.
- ❖ Pliosaurus lived in the Earth's oceans at a time when dinosaurs roamed the land.

