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Radio collar

Recently, in Kuno Palpur national park 3 cheetahs have died and serious infection in another 6 animals have been attributed to injuries, possibly caused by ticks festering under their radio collars.

- **Radio-collaring** - Radio Collars are basically radio transmitters (which transmits light waves in the range of radio frequency (RF) waves), that can be used to detect the movement of a person or an animal.



- The collar consists a multiplicity of radio signal receivers each having a receiving antenna.
- The system transmitter continuously transmits a RF signal and a mobile receiver assembly mounted in the collar unit on the person/animal.
- The receiver assembly receives the RF signal and measures the intensity of the received signal.
- The transmitter emits a signal at a specific frequency that can be tracked from up to 5 kms away.
- It is a valuable tool in ecological research for tracking animal movements and behaviour to aid conservation efforts.



Challenges associated with Radio Collars

- **Material** - The collar was made of double Butyl (polymer) layers, was too big and too stiff for the animal.
- **Wound** - It causes wound to the cheetahs as the collar was tight and heavy.
- **Battery life** - A lighter collar usually has a shorter battery life/limited range, leading to more replacements.
- **Low immunity** - The pathogens would aggravate the wound caused by the collar.

References

1. [The Indian Express | What went wrong with radio collars?](#)
2. [The Wire | Radio Collar Infections a 'Cause for Concern'](#)
3. [The Indian Express | Radio collars are killing the cheetahs](#)

Federal Funds Rate

A recently held Federal Open Market Committee decided to increase the targeted federal

funds rate to 5.25- 5 5%.

- **Federal funds rate** - This is the rate at which banks lend and borrow excess reserves in the overnight market.



- In any economy, there is a set of banks which want to extend loans far more than the reserves permit and another which have excess reserves to lend.
- These banks can loan funds among them and the rate in that market is the federal funds rate.
- **The Federal Open Markets Committee** sets the federal funds rate to guide overnight lending among U.S. banks.

The Federal Open Market Committee

- The Federal Open Market Committee (FOMC) is the branch of the Federal Reserve System (FRS).
- It determines the direction of monetary policy in the United States by directing **Open Market Operations (OMOs)**.
- The committee is made up of 12 members.
 - The President of the Federal Reserve Bank of New York
 - 7 members of the Board of Governors
 - 4 of the remaining 11 Reserve Bank presidents, who serve on a rotating basis.

References

1. [The Hindu | Federal fund hike impact](#)
2. [Investopedia | Federal Open Market Committee \(FOMC\)](#)

Languages in UN

As China had objected to the use of non-UN languages like Sanskrit in any of the G-20 texts, the central government defends use of Vasudhaiva Kutumbakam in the recent G-20 meeting.

- **Languages in UN** - There are 6 official languages of the UN.
- The official languages was adopted by UN in 1946.
- These are **Arabic, Chinese, English, French, Russian and Spanish**.



- **Official languages** - They are the languages in which all official United Nations documents are made available.
- Most UN documents are issued in all six official languages, requiring translation from the original document.
- **Working languages** - They are used for internal communications among staff.
- English and French are the working languages of the Secretariat.
- Some of the other official languages may also be working languages in the Regional Commissions.

References

1. [The Hindu | Centre defends use of Vasudhaiva Kutumbakam](#)
2. [United Nations | UN's Official Languages](#)

Red Sea

More than 3,000 United States military personnel have arrived in the Red Sea aboard two warships after tanker seizures by Iran.

- Red Sea is situated between Africa (Egypt, Sudan, and Eritrea) and the Arabian Peninsula (Saudi Arabia and Yemen).
- It is a part of the Great Rift Valley.
- The northern portion of the Red Sea is bifurcated by the ***Sinai Peninsula*** into the Gulf of Aqaba and the Gulf of Suez, where it is connected to the Mediterranean Sea via the famous Suez Canal.
- The Red Sea is linked with the Gulf of Aden and the Arabian Sea by the straits of ***Bab el Mandeb***.



- The Red Sea contains some of the world's hottest and saltiest seawater.
- With its connection to the Mediterranean Sea via the Suez Canal, it is one of the most heavily traveled waterways in the world, carrying maritime traffic between Europe and Asia.
- Its name is derived from the colour changes observed in its waters. Normally, the Red Sea is an intense blue-green.
- Sometimes it is populated by extensive blooms of the algae ***Trichodesmium erythraeum***, turn the sea a reddish brown colour.

References

1. [The Hindu | Thousands of U.S. sailors reach Red Sea](#)
2. [Image Credits | World Atlas.com](#)

Porpanaikottai

A portion of a circular brick structure has been unearthed by archaeologists at Porpanaikottai, a Sangam-age site, in Pudukottai district of Tamil Nadu.

- Porpanaikottai is situated at Pudukottai, Tamilnadu.
- Light Detection and Ranging (LIDAR), a remote sensing method, indicated that a fort had existed there.
- The age of the fort to be around 13th century to 14th century.
- The name Porpanaikottai could have been derived from the designative name of the Paana chieftain clan or based on the village's name Porpanai.
- The site had grave goods indicating a burial site, conch bangles, fragments of red and black pots, of pots engraved with Tamili, iron fragments, glass beads and weapons made of bones.

- A golden nose stud or earring weighing 0.2g, a bone point and a fragment of carnelian bead was found at this site.



- The fort area had temples for Muneeswaran and Karuppan on all four sides, ruins of a palace and there were signs of waterbodies inside too.
- A hero stone mentioning the name of one ***Kanangkumaran*** who hailed from Adhavanur was found at the site.
- **Sangam Age** - The Sangam Age is a period that is dated from 300 BCE to 300 CE.
- The excavation sites of Sangam Age include:

1. Keeladi
2. Sivagalai
3. Adichanallur
4. Kodumanal

References

1. [The Hindu | More brick structures unearthed at Porpanaikottai](#)
2. [The Times of India | Ruins of fort at Porpanaikottai](#)
3. [The Times of India | Golden nose stud unearthed at Porpanaikottai](#)

