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Mount Lewotobi Laki-Laki volcano

Indonesia's Mount Lewotobi Laki-Laki volcano continues to erupt, spewing ash clouds and causing widespread disruption.

- Mount Lewotobi Laki-Laki is an active volcano located on Flores Island in Indonesia's East Nusa Tenggara province.
- It is one of the two main peaks of the twin volcano Lewotobi.
- **Twin Volcanoes -** Lewotobi Lakilaki (man) and Lewotobi Perempuan (woman).
- It is known for its ***stratovolcano structure*** and is situated close to its counterpart, Lewotobi Perempuan (Female Lewotobi).
- It is Part of the ***Pacific "Ring of Fire".***

Pacific Ring of Fire is a horseshoe-shaped region around the Pacific Ocean that is known for its high levels of seismic and volcanic activity, home to more than 75% of the world's volcanoes and 90% of its earthquakes.

Volcanoes

- Volcanoes are openings, or vents where lava, tephra (small rocks), and steam erupt onto the Earth's surface.
- **Occurrence –** It can be on land and in the Ocean in Earth.
- **Types –** According to the British Geological Survey, the type of volcano depends
  - On the viscosity of the magma
  - On the amount of gas in the magma
  - On the composition of the magma
  - On the way the magma reaches the surface
  - On basis of their activity – Active dormant and extinct
- Shield Volcanoes, Cinder cones, Composite Volcanoes (Stratovolcanoes), Caldera, Flood Basalt Provinces, Mid-Ocean Ridge Volcanoes, Active volcano.

Strato volcanoes

- They are characterized by a steep, conical shape formed from alternating layers of lava flows, volcanic ash, and other volcanic debris.
- This layered structure contributes to their towering height.
- **Eruption Style -** Stratovolcanoes typically exhibit explosive eruptions due to the thick, viscous nature of their magma, which is often rich in silica.
- This viscosity can trap gases, leading to pressure buildup and explosive eruptions, as opposed to the more gentle eruptions seen in shield volcanoes.

- **Lava Composition -** The lava produced is usually ***andesitic to rhyolitic*** in composition, meaning it has a moderate to high silica content, contributing to its viscous nature.
- **Activity -** Stratovolcanoes can have long periods of dormancy between eruptions, but when they do erupt, it can be highly explosive. This can create pyroclastic flows, ashfall, and lava domes.
- **Geographic Distribution -** They are commonly found at ***convergent plate boundaries,*** where an oceanic plate subducts beneath a continental plate, leading to magma generation.
- Many well-known volcanoes, like Mount St. Helens and Mount Fuji, are stratovolcanoes.

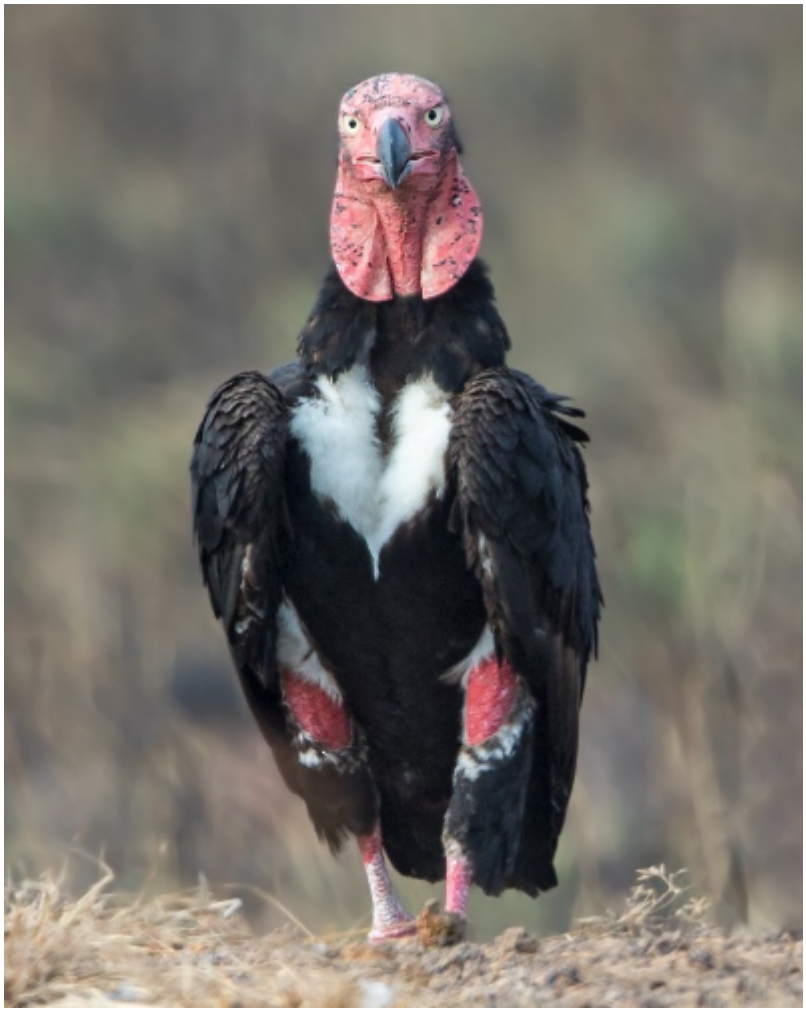
References

1. The Hindu | Mount Lewotobi Laki Laki volcano Eruption
2. Times of India | Mount Lewotobi Laki-Laki volcano Eruption

Red-Headed Vulture

A rare Red-Headed Vulture recently spotted for the first time in Kasaragod, Kerala.

- **Scientific Name -** Sarcogyps calvus.
- **Family –** Accipitridae.
- It is also known as the ***Asian King Vulture.***
- **Appearance –** It is a dark, medium-sized vulture with a bare reddish head and loose flaps on the side of the neck.
- It distinguished by its scarlet crown and black body.
- **Wingspan -** Up to 2.5 m.
- **Weight -** Around 5 kg and averaging over 80 cm in length.
- **Habitats -** Inhabits ***dry forests*** and adjacent areas.
- **Distribution -** It is typically found in Central India, Nepal, Myanmar, Thailand, Vietnam, and parts of Kerala, Karnataka, and Tamil Nadu.
- **Behavior** - The vulture is ***primarily solitary,*** often seen alone or with a mate.
- **Breeding -** Breeding typically takes place between November and January.
- **Conservation status**
  - **Wild Life Protection Act, 1972 -** Schedule-I.
  - **IUCN -** Critically endangered
- **Threats -** Habitat loss, food scarcity, and, most notably, the use of diclofenac, a drug given to cattle that proved fatal to vultures feeding on carcasses.



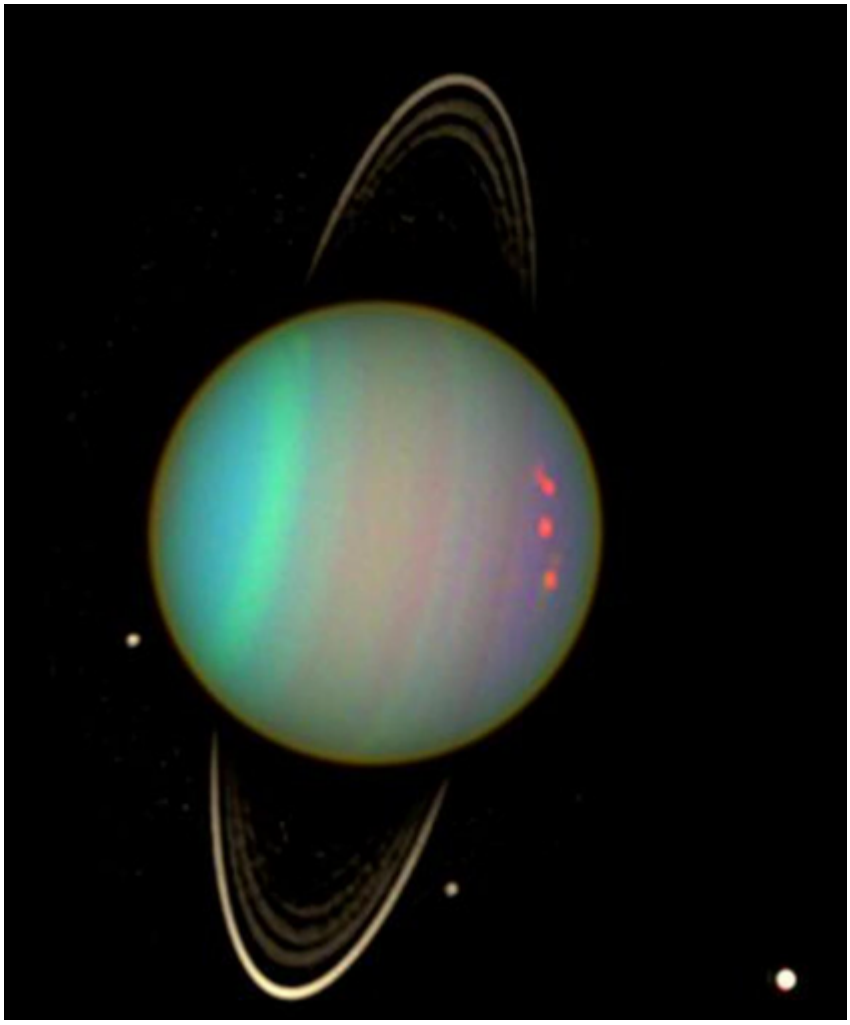
Reference

The Hindu | Red-Headed Vulture

Magnetic understanding of Uranus

Recently, the Scientists had uncovered a magnetic misunderstanding about Uranus.

- **Uranus –** It is a ***3rd largest planet*** in our solar system.
- **Discovered by** - British astronomer William Herschel in 1781, the first planet discovered with the aid of a telescope.
- **Colour -** It is ***blue-green in colour due to the methane*** contained in the atmosphere comprised mostly of hydrogen and helium.
- **Orbit -** Its unusual tilt makes Uranus appear to orbit the sun like a rolling ball.
- **Size -** It has a ***diameter of about 31,500 miles*** (50,700 km).
- It has 28 known moons and two sets of rings.
- **2 largest moons - *Titania and Oberon***.



- **Voyager 2 –** It is a space probe launched by NASA on August 20, 1977, as a part of the Voyager program.
- Voyager 2 is the only spacecraft to visit Uranus and Neptune and the probe is now in interstellar space, almost 13 billion miles (21 billion kilometers) from Earth.

Interstellar space is the region outside the heliopause, or the bubble of energetic particles and magnetic fields from the Sun.

- **Voyager 2 flyby of Uranus -** When NASA's Voyager 2 spacecraft flew by Uranus in 1986, it provided scientists' first — and, so far, only — close glimpse of this strange, sideways-rotating outer planet.
- **Misreading of Voyager -** The Voyager 2 observations had suggested that Uranus has
    - Small magnetosphere

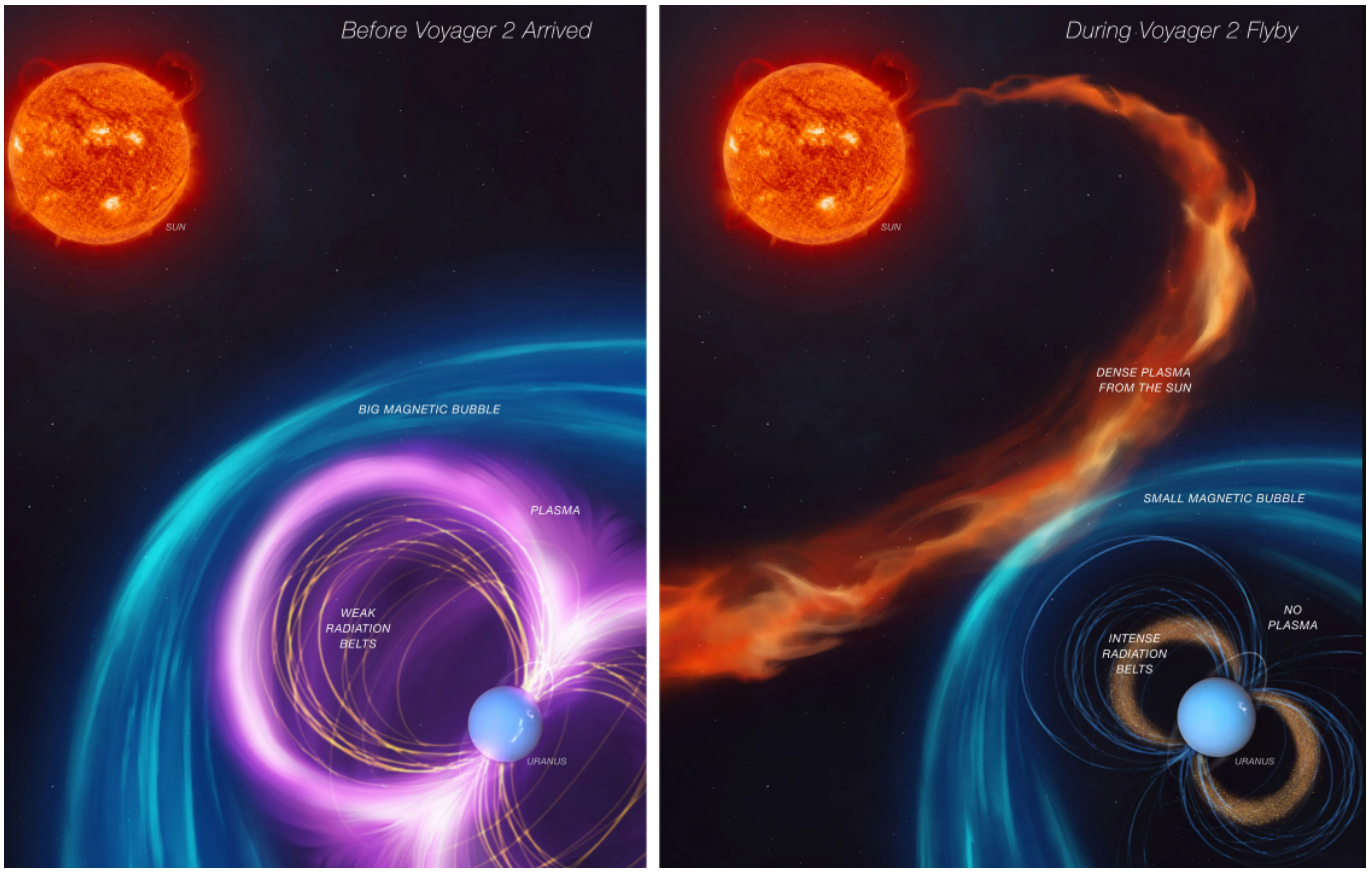
Magnetosphere is a region of space surrounding a planet where the planet's magnetic field dominates, creating a protective zone against solar and cosmic particle radiation.

    - No plasma in the atmosphere

Plasma is the fourth state of matter after solids, liquids and gases - is a gas whose atoms have been split into high-energy subatomic particles and Plasma is a common feature in the magnetosphere of other planets .

    - Intense radiation belts
    - Its two largest moons - Titania and Oberon - orbit outside the magnetosphere.
- **Recent Findings –** Uranus has
    - Large magnetosphere
    - Plasma in the magnetosphere
    - Weak radiation belts
    - Titania and Oberon orbit within the magnetosphere
- **Reason for the misreading** – Voyager 2 had visited the Uranus after the planet was hit by a strong solar storm which had striped its magnetosphere.

Solar Wind is a high-speed flow of charged particles emanating from the sun.



References

1. The Hindu| Magnetic understanding of Uranus
2. NASA | Uranus Mysteries

Bodoland Mohotsav

Recently 1st Bodoland Mohotsav has been celebrated in New Delhi.

- **Bodoland Mahotsav** - The 2-day Mahotsav is a mega event on language, literature, and culture to sustain peace and build a Vibrant Bodo Society.
- **Aim** – To integrate the indigenous Bodo people residing in Bodoland and other parts of Assam, West Bengal, Nepal, and international border areas of the Northeast.
- Capitalise on the richness of cultural and linguistic heritage, ecological biodiversity, and touristic potential of Bodoland.
- **Theme** - Peace and Harmony for Prosperous Bharat
- **Bodos** - The Boro , also called Bodo, are an ethnolinguistic group native to the state of Assam in India.
- **Bodo Kachari** - They are a part of the greater Bodo-Kachari family of ethnolinguistic groups and are spread across northeastern India.
- They are concentrated mainly in the Bodoland Territorial Region of Assam, though Boros inhabit all other districts of Assam and Meghalaya.
- **Scheduled Tribes** - Boros were listed under both "Boro" and "Borokachari" in The Constitution (Scheduled Tribes) Order, 1950.
- **Bodoland** – It is officially the Bodoland Territorial Region, is an autonomous region in Assam, Northeast India.
- Bodoland is named after Bodo, an alternative spelling of the Boro people who live primarily in the Dooars regions of Goalpara and Kamrup districts.
- It is predominantly inhabited by the Bodo people and other indigenous communities of Assam.
- **Bodo Movement** - All Bodo Students' Union launched the Bodo Movement in 1987 with the demand for a separate state to be called Bodoland, ending with the Bodo Accord of 1993 with the formation of Bodoland Autonomous Council.
- **Bodo Peace Accord in 2020**- It was signed between the Government of India and the Government of Assam on one side and the National Democratic Front of Bodoland, (NDFB) the All Bodo Students' Union and United Bodo People's Organisation on the other.
- Under the terms of this agreement, a Bodoland Territorial Region was formed with enhanced executive and legislative powers.
- **Districts** - It is made up of four districts on the north bank of the Brahmaputra river below the foothills of Bhutan and Arunachal Pradesh.
- **Bodoland Territorial Council** - Bodoland is administered by an elected body known as the Bodoland Territorial Council which came into existence under the terms of a peace agreement signed in February 2003.
- **Bodo Culture**
  - **Religion -** Bathouism
  - **Dance –** Bagurumba**,** Kherai Group Dance
  - **Jou Gishi** - Rice beer is produced by the Boros from different kinds of rice varieties.
- **Festival** – Bwisagu.



Bodoland Within India

- Established: 9 February, 2003
- Govt. Type: Autonomus Administrative Region
- Body: Bodoland Territorial Council
- Total Area: 8,970 Km2
- Official Languages: Bodo, English, Assamese

Reference

PIB | Bodoland Mahotsav

Digital Life Certificates (DLCs)

The Department of Pension & Pensioners' Welfare data show that as of March this year, there were 64.88 crore central government pensioners and 1.47 crore certificates were generated during DLC campaign.

- Jeevan Pramaan is a biometric-enabled, Aadhaar based digital service that allows ***pensioners to generate a Digital Life Certificate (DLC)*** for themselves.
- **Introduced by -** The Department of Pension & Pensioners' Welfare (DoPPW) in 2014.
- It is officially recognized under the ***Information Technology Act.***
- It can be generated ***online anywhere,*** and is made available directly to the relevant pension-disbursing authority.
- It eliminates the need to be physically present at the pension disbursing agency or certification authority including banks and post offices.
- **Eligiblity –** Pensioners of Central Government, State Government or any other Government organization such as Defence services, Railways, public sector undertakings, and many higher education institutions, etc can take benefit of this

facility.

- **Distribution –** It is disbursed by the various government bodies forms the basis for their income and sustainability.
- From 2021 onward, face authentication has been added as an option.
- **Jeevan Pramaan version 3.0 -** UIDAI has introduced new Aadhaar Authentication Framework version (ver. 3.0) of Jeevan Pramaan Application to support the scheme.
- Every November, retirees have to submit a "life certificate" to continue to receive their pensions for ***another year.***

The largest number of DLCs have been generated in Maharashtra so far, followed by Tamil Nadu, West Bengal, Uttar Pradesh, and Karnataka.

References

1. The PIB| Digital Life Certificates (DLCs) Campaign
2. The Indian Express| Digital Life Certificates (DLCs) Campaign

