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History, Art and Culture

Shirui Lily Festival 2025: A Celebration of Nature and Culture

Manipur's 5th State-Level Shirui Lily Festival unfolds from May 20-24, 2025, in Ukhrul, marking 75 years since the rare Shirui Lily's discovery.

• **Significant** -Returning after a hiatus, the festival promotes responsible tourism and global awareness for the endangered lily's conservation.

• **A Floral and Cultural Extravaganza** - The event blends Tangkhul Naga traditions, music (SHIROCK), indigenous games, and modern entertainment.

• **Adventure and Cultural Highlights** - Attendees can enjoy trekking, biking, the Shirui Lily Grand Prix, a literature festival, a beauty pageant, and culinary and textile showcases.

• **Locations** - The festival spans Shirui Village (opening), TNL Ground, Phangrei, and Bakshi Ground (closing).

• **Ukhrul -A Prime Destination** - The festival boosts tourism to Ukhrul, showcasing its beauty and the Tangkhul Naga culture, with enhanced travel accessibility.

Geography

Madku Island: A Hidden Gem

Nestled in Chhattisgarh's Bilaspur district on the Shivnath River, Madku Island boasts natural beauty and historical significance.

• **Mythological Confluence -** Revered as Harihara-Kshetra and Kedar Dweep, it's believed to be the meeting point of Lord Vishnu and Lord Shiva, also linked to Sage Mandukya.

• **Archaeological Treasures -** Excavations revealed 11th-century Kalachuri temples, sculptures, and Brahmi/Shankhalipi inscriptions. Twenty rebuilt temples house various deities.

• **Ancient Habitation -** Stone Age tools near the island indicate very early human presence. Sandstone temple remnants and idols are still visible.

• **Cultural Harmony -** The annual Masihi Mela, a Christian fair since 1909, celebrates Hindu-Christian unity on the island.

• **Literary Connection -** American missionary George E. Miller documented island life in his novel, "Prem Masih of Damoh."

New Caledonia Political Talks Stall

Negotiations regarding New Caledonia's future status collapsed on May 8, 2025, due to loyalist rejection of France's "sovereignty in partnership" proposal.

• **Southwestern Pacific Location** - Situated 1,500 km east of Australia, New Caledonia's capital is Nouméa, bordered by Australia, Vanuatu, and Fiji.
• **French Overseas Collectivity** - While administratively linked to France, New Caledonia enjoys substantial autonomy.
• **Historical Path to Self-Determination** - Colonized by France in 1853, Kanak resistance in the 1980s led to the 1998 Nouméa Accord and three independence referendums (all rejected).
• **Diverse Geography and Climate** - The main island, Grande Terre, features rugged terrain and the UNESCO-listed New Caledonian Barrier Reef. Its subtropical climate varies from wet east to drier west.
• **Unique Biodiversity** - The territory is home to the ancient Amborella trichopoda and endemic birds like the kagu, despite lacking native mammals and frogs.

Indrayani River: Illegal Structures Demolished

The Pimpri-Chinchwad Municipal Corporation (PCMC) recently demolished 36 illegal bungalows in the River Villa project, situated within the Indrayani River's blue flood line in Chikhali.

• **Origin and Course** - The Indrayani, a 103.5 km long rain-fed river in Maharashtra, originates in the Western Ghats near Lonavala and flows through Pune district before merging with the Bhima River at Tulapur.
• **Tributary of Bhima-Krishna System** - It is a significant tributary of the Bhima River, which itself is a major tributary of the Krishna River, forming part of a larger river network.
• **Religious Significance** - The sacred towns of Alandi and Dehu, important pilgrimage sites for poet saints Dnyaneshwar and Tukaram respectively, are located on its banks.
• **Industrial and Agricultural Role** - The river flows through the industrial town of Pimpri-Chinchwad, serving purposes of irrigation and supporting local agriculture.
• **Hydroelectric Power Generation** - The Valvan Dam at Kamshet, built on the Indrayani River, functions as a hydroelectric power generating station.

Polity & Governance

Sikkim Celebrates 50 Years of Statehood

India's PM lauded Sikkim on its golden jubilee, marking its 1975 integration.

• **Strategic Himalayan Location -** Nestled in Northeast India, Sikkim borders Nepal, Bhutan, and China, with West Bengal to its south. Its capital is Gangtok.
• **Journey to Statehood -** Formerly ruled by the Namgyal dynasty and a British/Indian protectorate, Sikkim became India's 22nd state via a 1975 referendum.
• **Pioneering Organic State -** Sikkim stands as India's first fully organic state, championing sustainable agriculture practices.
• **Ecological and Cultural Wealth -** Part of the Eastern Himalayas, it's a biodiversity hotspot rich in flora and fauna, with a vibrant blend of Lepcha, Bhutia, and Nepali cultures and Buddhist traditions.
• **Strategic and Sustainable Focus -** Sikkim holds strategic geopolitical importance and emphasizes eco-tourism, clean energy, and heritage conservation.

International Relations and Issues

Operation Gideon Chariots Launched in Gaza

Israel has initiated Operation Gideon Chariots, a significant military offensive in the Gaza Strip.

• **Objective -** Is to secure the release of Israeli hostages held by Hamas, coupled with intensified military pressure to weaken Hamas's capabilities.

• **Trigger -** The operation follows the collapse of ceasefire negotiations in Doha, signaling a renewed escalation of the conflict.

• **Impact and Affected Areas -** Northern Gaza, notably the Jabaliya refugee camp, has experienced heavy bombardment.

• **Casualty Reports -** Tragically, over 150 deaths were reported in Gaza within 24 hours, with more than 3,000 fatalities since the March escalation.

Economy

GeM Celebrates 8 Years of Transforming Public Procurement

India's Government e Marketplace (GeM) commemorated its 8th Incorporation Day, reaffirming its pivotal role in fostering inclusive economic growth and advancing digital governance.

• **Inclusive Innovation –** It will Simplify the process and empowering entrepreneurs, creating an accessible and equitable marketplace for diverse sellers.

• **Impressive Growth and Cost Efficiency -** GeM has witnessed a threefold increase in users, with over 1.64 lakh buyers and 4.2 lakh sellers. Independent assessments indicate nearly 10% cost savings in government procurement.

• **Empowering Small and Marginalized Sellers**

• The platform actively supports over 10 lakh MSEs, artisans, women entrepreneurs, and startups, ensuring broad participation in public procurement.

• **Reduced Transaction Costs -** Nearly all transactions are now free of charges, and fees have been significantly reduced. Advanced analytics ensure transparency and fraud detection.

• **Driving National Initiatives -** GeM has facilitated crucial procurements and launched GeMAI, India's first generative AI chatbot in the public sector, enhancing user support in multiple languages.

Science

Spectacular "Bird-Wing" Solar Eruption

A massive and visually striking solar flare, dubbed the "bird-wing" eruption due to its plasma shape, has been observed on the Sun's northern hemisphere.

• **Million-Kilometer Plasma Ejection -** NASA satellites recorded the event, revealing a plasma stream extending over 1 million km, twice the Earth-Moon distance.

• **Combined Flare and CME -** The eruption involved both an intense solar flare (electromagnetic radiation burst) and a significant coronal mass ejection (CME) of charged plasma.

• **Immediate Radio Blackouts -** The initial radiation from the flare has already caused radio communication blackouts across parts of Asia, Africa, Europe, and the Americas.

• **Anticipated Geomagnetic Storm -** The approaching CME, traveling at 250–3000 km/s, is expected to trigger geomagnetic storms upon Earth's arrival in 1-3 days.

• **Potential Earth Impacts -** Geomagnetic storms can disrupt satellites, GPS, radio, and power grids, while also potentially enhancing auroras at lower latitudes. Space weather agencies are on high alert.

A-to-I mRNA Editing in Animals

Chinese researchers highlight the evolutionary mystery surrounding the widespread presence of A-to-I mRNA editing in the animal kingdom.

• **The A-to-I Editing Mechanism -** This process involves the enzymatic conversion of adenosine (A) to inosine (I) within messenger RNA (mRNA) by ADAR proteins. Ribosomes interpret inosine as guanine (G).

• **Consequences for Protein Diversity -** A-to-I editing modifies the mRNA sequence after transcription, leading to the production of proteins with potentially altered amino acid sequences, stability, or activity.

• **Risk of Stop Codon Misinterpretation -** A significant concern is the editing of stop codons (e.g., UAG), which could be misread, resulting in the synthesis of abnormally long and potentially dysfunctional proteins.

• **Essential Genes with Premature Stops (PSC) -** Studies in *F. graminearum* identified 71 PSC genes containing premature stop codons in their unedited mRNA transcripts.

PSLV-C61 Mission Failure

ISRO's PSLV-C61 mission to deploy EOS-09 into a Sun-synchronous orbit from Sriharikota unfortunately failed due to a third-stage malfunction.

• **Polar Satellite Launch Vehicle (PSLV)** - Is ISRO's four-stage rocket, primarily designed for Earth observation satellites in Sun-synchronous polar orbits (SSPOs).

• **Four-Stage Design** - PSLV employs alternating solid and liquid propulsion stages for precise medium-weight payload delivery to various orbits.

• **First and Second Stages** - The first stage uses Hydroxyl-Terminated Polybutadiene (HTPB) solid propellant with optional strap-on boosters, while the second stage utilizes the Vikas engine with UDMH/N_2O_4 liquid fuel.

• **Third and Fourth Stages** - The third stage is a solid HTPB propellant engine, and the final fourth stage has two liquid engines burning Monomethylhydrazine (MMH) and Mixed Oxides of Nitrogen (MON).

• **SSPO for Earth Observation** - Sun-synchronous polar orbits are ideal for Earth observation missions, which are the primary targets for PSLV launches.

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