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NEARBY

Woman fined for false sexual harassment complaint

NEW DELHI
The Delhi High Court imposed a cost of ₹50,000 on a woman for filing a false complaint of sexual harassment against her senior colleague. The court said there was no merit in the woman's petition in which she has challenged a 2012 order of an internal complaint committee. She had alleged that her colleague had misbehaved and made sexual advances at her in 2011.

CITY ▶ PAGE 2

ISRO's lunar touchdown has dry run on soil fetched from Tamil Nadu

Chandrayaan-2's lander and rover were tested on a simulated surface

MADHUMATHI D.S.
BENGALURU

Newly designed cars are tested for road-worthiness on terrain where they would be driven, while new aircraft are test-flown in the skies. But where on earth did the Chandrayaan-2 mission's lander and rover, which will head for the moon on July 15, check out their legs and wheels?

More than a decade ago, even as the Chandrayaan-1 orbiter mission of 2008 was being readied, the Indian Space Research Organisation (ISRO) created a proto-Lunar Terrain Test Facility (LTTF) at its advanced satellite testing unit, ISITE, in Bengaluru. This, it did, by modifying a balloon research lab, about 30-40 m high, long and wide.

At the time, ISRO was grappling with the task of indigenously executing the cryogenic stage for its GSLV MkII rocket. Any thought of sending a moon lander was a distant dream of low priority. Equipping the LTTF and making it look and feel like being on the moon was the first challenge. It needed lunar 'soil' with almost all its features and texture, lunar temperatures, low gravity and the same amount of sunlight as on the moon.

For recreating the terrain, an option was to import simulated lunar soil from the U.S. — at an exorbitant \$150 a kg (the then prevailing price). The facility needed about 60-70 tonnes of soil. ISITE's parent, the U.R. Rao Satellite Centre, or URSC (it was called the ISRO Satellite Centre or ISAC at the time) did buy a small amount of simulated lunar soil from the U.S., but soon decided to find its own solution at a lower cost.

M. Annadurai, who as URSC Director oversaw activities related to the Chandrayaan-2 spacecraft until he retired in August 2018, re-

counts that geologists of various national agencies had found that a few sites near Salem in Tamil Nadu had the 'anorthosite' rock that somewhat matches lunar soil in composition and features. The URSC's lunar soil simulation studies team zeroed in on Sithampundi and Kunnamalai villages for the soil.

It turned out to be a ₹25 crore project: experts from the National Institute of Technology in Tiruchi, Periyar University in Salem, and the Indian Institute of Science, Bengaluru, joined in, working without any fee.

TESTED ON 'CRATERS' ▶ PAGE 12

Mission moon 2.0

A look at the four key components of Chandrayaan 2 — launcher, orbiter, lander and rover

Launcher — GSLV Mk-III | It will carry Chandrayaan 2 to its designated orbit. This three-stage vehicle is India's most powerful launcher to date, and is capable of launching 4-tonne class of satellites to the Geosynchronous Transfer Orbit

ORBITER
Weight: 2,379 kg
Power generation capability: 1,000 W
Capable of communicating with the Indian Deep Space Network at Bhalalu and the Vikram lander. It will be placed in a 100X100 km lunar polar orbit

LANDER — VIKRAM
Weight: 1,471 kg
Power generation capability: 650 W
Named after Vikram Sarabhai, the Father of the Indian space programme, it is designed to function for one lunar day, equivalent to about 14 earth days

ROVER — PRAGYAN
Weight: 27 kg
Power generation capability: 50 W
This 6-wheeled robotic vehicle can travel up to 500 m and uses solar energy for its functioning. It can communicate only with the lander

Water on wheels



Just in time: Chennai received its first water train from Vellore district on Friday. The train, carrying 2.5 million litres in 50 wagons, covered 200 km from Jolarpet to Villivakkam in four hours. Here, it is passing Vaniyambadi. • C. VENKATACHALAPATHY

SC tells Speaker to defer call on Karnataka MLAs

Court orders status quo, schedules hearing for Tuesday

KRISHNADAS RAJAGOPAL
NEW DELHI

The Supreme Court on Friday pressed the pause button in the legal battle for power in Karnataka, asking Assembly Speaker K.R. Ramesh Kumar to refrain from deciding on the disqualification or resignation of 10 rebel Congress-Janata Dal (Secular) MLAs for the time being.

The order comes just a day after the court asked Mr. Ramesh Kumar to meet the 10 MLAs at 6 p.m. on July 11 and decide on their resignations "forthwith or in the course of the remaining part of the day".

On Friday, a Bench, led by Chief Justice of India Ranjan Gogoi, ordered status quo and scheduled the hearing for Tuesday next.



In a spot: Karnataka Chief Minister H.D. Kumaraswamy, right, having a word with his deputy G. Parameshwara in the Assembly on Friday. • K. MURALI KUMAR

The Bench's decision came after an hour-long hearing, in which Chief Minister H.D. Kumaraswamy said the rebel MLAs had dragged the court into a "political thicket".

The Speaker, in turn, ac-

cused the legislators of feeding the court with a petition "full of blunders and distortions".

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AFTERSHOCKS IN GOA ▶ EDITORIAL

IIP dips to 3.1% in May owing to slowdown

SPECIAL CORRESPONDENT
NEW DELHI

Growth in industrial activity slowed in May to 3.1%, driven by an across-the-board deceleration, especially in consumer durables, according to official data released on Friday.

Retail inflation in June quickened marginally to 3.18% — from 3.05% in May — owing to a rise in food price inflation, a separate release said.

Growth in the Index of Industrial Production (IIP) slowed in May from 4.32% in April. Within the index, the mining sector slowed to 3.16% in May from 5.07% in April. The manufacturing sector saw growth slowing to 2.46% from 3.98% over the same period.

Driven by increased demand during the summer months, the electricity sector saw growth accelerating in May.

Pak. asks India to pull back fighter jets

Airspace ban along eastern border extended until July 26

PRESS TRUST OF INDIA
ISLAMABAD

Pakistan has told India that it will not open its airspace for commercial flights until Indian Air Force fighter jets are removed from forward airbases, its Aviation Secretary Shahrukh Nusrat informed a parliamentary committee.

The country's Civil Aviation Authority also announced on Friday that the airspace ban along its eastern border with India has been extended for the fifth time till July 26.

Pakistan fully closed its airspace on February 26 after the IAF fighter jets struck a Jaish-e-Mohammed terrorist training camp in Balakot

following the Pulwama terror attack in Kashmir.

Mr. Nusrat, who is also the Director General of the CAA, told the Senate Standing Committee on Aviation on Thursday that the Indian government had approached Pakistan to open the airspace.

"We conveyed our concerns that first India must withdraw its fighter planes placed forward," Dawn News quoted him as telling the panel.

Review decision

A CAA official said the Pakistan government will review whether to open its space for Indian flights or not on

July 26. "However, this issue is a bilateral one and no progress will be made till both Islamabad and New Delhi decide it mutually," he said.

Last month, for the fourth time, the CAA had extended the airspace ban till July 12.

"The Panjgor airbase will remain open for overflying transit flights from the western side as Air India had already been using that airbase," the authority said in a notice on Friday.

Civil Aviation Minister Hardeep Singh Puri told Parliament on Thursday that due to the closure of Pakistan airspace, Air India had to spend an extra ₹430 crore on longer routes.

Kiran Bedi asked to move Division Bench first

Supreme Court disposes of her appeal

LEGAL CORRESPONDENT
NEW DELHI

The Supreme Court on Friday disposed of a petition filed by Puducherry Lieutenant Governor Kiran Bedi for clarity on the issue of control over bureaucrats in the wake of a turf war between the LG's office and the Chief Minister in the Union Territory.

A Bench, led by Chief Justice of India Ranjan Gogoi, found that the LG had directly appealed in the Supreme Court against the decision of a single-judge Bench of the Madras High

Court without first moving the High Court's Division Bench.

The court left it open for the LG to move the Division Bench. It did not agree with Solicitor General Tushar Mehta's repeated submission that the appeal would eventually reach the Supreme Court, so the case might as well be heard now by the highest court. Incidentally, the court on May 10 issued notice on the appeal against the single judge's decision.

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Chinese men unfurl banner near LAC

Incident occurred at Demchok village

SPECIAL CORRESPONDENT
SRINAGAR/ NEW DELHI

At least 11 men in civilian clothing on Friday morning drove close to the Line of Actual Control (LAC) in J&K's Ladakh region from the Chinese side and unfurled a big banner apparently "to counter the Dalai Lama's birthday celebrations in a nearby village on this side".

The incident, according to officials in the Army and the administration, occurred at Demchok village.

The officials could not confirm if the men were from the Chinese Army or

from a nearby village.

"People in civvies drove down in two to three vehicles and came opposite the village where the celebrations were held and unfurled a long red banner, reading 'Ban all activity to split Tibet'," said the officials.

They added there was no attempt to intrude or "violate the sanctity of the LAC". It was an attempt at 'intimidating' the locals, added an official. "Phukche festival organised on the Dalai Lama's birthday is a regular feature in Ladakh," another official said.

CWC likely to decide on Cong. chief next week

SPECIAL CORRESPONDENT
NEW DELHI

Ten days after Rahul Gandhi went public with his resignation as party chief, the Congress is yet to schedule a meeting of the Congress Working Committee to decide on his successor.

Sources in the party on Friday indicated that it could take place next week once there is clarity on the Karnataka political situation. Several party veterans had questioned the delay as well as the procedure of finding a replacement.

DETAILS ON ▶ PAGE 12

Homes lost, Malad wall collapse victims still in hospital

Many of the 41 persons admitted to Dr. Babasaheb Ambedkar Municipal General Hospital 'fit for discharge'

JYOTI SHELAR
MUMBAI

Of the 41 persons injured in the Malad wall collapse and admitted to Kandivali's Dr. Babasaheb Ambedkar Municipal General Hospital, half are fit for discharge. But with no homes left to return to, the hospital has kept them as 'social admissions' till a shelter is arranged.

"It is a sensitive issue now," said medical superintendent Pradeep Angre.

"We cannot force these patients out as their homes have been destroyed. So we are treating them like social

admissions. Some of the patients who could stay with relatives or friends have moved out but others are reluctant to leave," Dr. Angre added.

The wall of a reservoir in the city's north-western suburb came crashing down during the heavy rainfall on July 1, killing 29 people, injuring more than 100 others and destroying over 100 shanties in Kurla village.

The injured were rushed to Mumbai's five city government-run hospitals, with a majority admitted to Dr. Babasaheb Ambedkar Municipal General Hospital.



Nowhere to go: Officials have requested the civic authorities to move such patients to a charitable home. • JYOTI SHELAR

On Friday, Assistant Commissioner of P North ward, Sanjog Kabare, visited the hospital and collected

details of the families who were there. "There is no clarity on how much time the rehabilitation procedure

will take," said Dr. Angre. "We have requested the civic authorities to move the patients to a charitable home or a school till their rehabilitation is finalised so that they don't have to occupy hospital beds," he added.

Among those who have made the hospital a temporary home is Alka Sakpal, 50, who lost her eldest daughter in the disaster. Her two other children remain hospitalised, despite being fit for discharge. "Where will we go," asked Ms. Sakpal.

OMAR RASHID
LUCKNOW

A group of madrasa students were assaulted and allegedly forced to chant 'Jai Shri Ram' purportedly by right-wing activists in Unnao, resulting in at least four of them being injured, police said on Friday.

The boys, all minors, were allegedly beaten with cricket stumps and bats, and also attacked with stones. "Almost all of them had their kurtas ripped by the miscreants," said Naeem Miswahi, the imam of the Darul Uloom Faize Aam Madrasa.

Around 10-12 boys of the

madrasa were playing cricket at the Government Inter College grounds in Unnao on Thursday afternoon when four youth approached them and asked them to chant 'Jai Shri Ram'. When the boys refused, they were slapped and hit with the stumps, Mr. Miswahi said.

'Struck by a stone'

"When we did not chant [Jai] Shri Ram, they hit us more," said one of the boys whose head was struck by a stone. Another boy was injured in the foot, while one had his hand fractured in the assault, said Mr. Miswahi.

An FIR was registered against four persons at the Kotwali police station in Unnao. Circle Officer Umesh Tyagi said police were investigating the role of the accused persons and if they belonged to any right-wing group or political party. Three of the accused have been identified. Two persons have been detained for questioning, said Mr. Tyagi.

Unnao Superintendent of Police M.P. Verma said that the investigation so far has not confirmed if the madrasa students were forced to chant 'Jai Shri Ram', but the incident is still being probed.