

### NEWSPAPER HIGHLIGHT

Maharashtra recorded 2,489 farmer suicides from January 1 to November 30, 2021, and 2,547 farmer suicides in 2020, with over 50% deaths coming from the State's Vidarbha region during both years. According to the information obtained by activist Jitendra Ghadge, based on an application under the Right to Information (RTI) Act, the State recorded 2,547 farmer suicides in the year 2020. Out of this, 1,206 deaths were eligible for aid as per the norms of the State government. When compared, the Aurangabad division, which covers the entire Marathwada area of the State, has seen an increase in the number of farmer suicides to 804 in 2021 from 773 in 2020. Nagpur division, which covers the eastern part of Vidarbha, witnessed an increase in the number of suicides to 309 in 2021 from 269 in 2020.

NASA's Transiting Exoplanet Survey Satellite (TESS) mission has spotted three huge Jupiter-like extrasolar planets that are orbiting dangerously close to their giant or sub-giant stars. One of them, TOI-2337b, is likely to get absorbed by its star in less than a million years, the shortest for any known exoplanet. The study helps in understanding the past, present and future of planets.

Researchers from Kerala have identified two new species of fungi from the genus Ganoderma that are associated with coconut stem rot. They have also genotyped the two fungi species, named Ganoderma keralense and G. pseudoapplanatum and identified genetic biomarkers. The DNA barcodes have been made publicly available in DNA sequence repositories so that future studies can use it for early detection of the pathogen. The research was published in the journal Mycologia.

A new study of dinosaurs led by University of Bristol made a reconstruction of the limb muscles of a small-to-medium sized dinosaur, Thecodontosaurus, which roamed the earth 205 million years ago. The study reveals how massive, 50-tonne quadruped dinosaurs like Diplodocus evolved from this biped species.

When two people agree, and 'click' during a conversation, this shows in their 'response times' or time between when one person stops talking and the other begins, finds a

### COMMITTEE ON PRIVILEGES

1.A BJP State President appeared before the Privileges Committee of Lok Sabha to explain how the police manhandled him. Privileges Committee is a Parliamentary Committee present in both the Houses of the Parliament.

2.It is one of the Standing Committees to Inquire. The functions of the Committee of Privileges are semi-judicial in nature. It examines the cases of breach of privileges of the House and its members and recommends appropriate action. The Lok Sabha committee has 15 members, while the Rajya Sabha committee has 10 members.

3.**Head - The Speaker of the Lok Sabha heads the committee of privileges, and nominates the members as per respective party strengths.** The Deputy Chairperson of the Rajya Sabha heads the committee in RS. A member of the House may, with the consent of the Chairman of the RS or Speaker of the LS, raise a question involving a breach of privilege either of a member or of the Council or of a Committee thereof.

4.**Conditions of admissibility - The right to raise a question of privilege shall be governed by the following conditions, namely:- The question shall be restricted to a specific matter of recent occurrence;** The matter requires the intervention of the Council. Parliamentary Privileges Each House of Parliament and its Committees collectively and members of each House individually enjoy certain rights, privileges and immunities.

5.Without these rights, privileges and immunities, these members cannot perform their functions efficiently and effectively. The object of parliamentary privilege is to safeguard the freedom, the authority and the dignity of Parliament. But they do not exempt the members from the obligations to the society which apply to other citizens. Parliamentary Committees Parliamentary Committees present in both the Houses of the Parliament.

### NATIONAL SINGLE WINDOW SYSTEM

1.The Minister of Commerce and Industry wants to take the National Single Window System (NSWS) to large corporations and the Indian Missions abroad. The Chief Information Security Officer will be nominated to work exclusively for the security and risk monitoring of the NSWS portal. **NSWS for investors and businesses was developed by the Department for Promotion of Industry and Internal Trade (DPIIT) under the Ministry of Commerce and Industry.**

2.It is a digital platform for guidance of entrepreneurs and investors to identify and to apply for approvals as per their business requirements. The platform is built to serve as an advisory tool to identify approvals based on user input and is to be used for guidance purpose only. The NSWS portal has been designed to host approvals across 32 Central Departments & 14 States. **3.This would bring Transparency, Accountability & Responsiveness in the ecosystem and all information will be available on a single dashboard.** Online Services include Know Your Approval (KYA), Common Registration & State registration Form, Document repository & E-Communication. Online Services KYA Service generates a list of approvals required by any business to commence operations.

4.This service is only for guidance purposes and does not constitute any legal advice. A unified information capturing system and a common registration form have been introduced to ensure a single point of submission of information and documents across Ministries and States. State registration form enables investor to have seamless single click access to respective State Single Window System. An applicant Dashboard would be there to apply, track & respond to queries.

5.Document repository is an online centralized storage service for investors to enable one-time document submission and use the same across multiple approvals. This eliminates the need to submit documents at multiple portals. E-Communication module enables online response to queries and clarification requests related to applications by Ministries and States.

study published in PNAS. The study examined response times of strangers and close friends. It also studied how listeners interpreted the quality of conversations between two others.

An international team of researchers studied the effect of exercise performed at different times in the day. The study, published in Cell Metabolism, reveals how the body produced different health-promoting signalling molecules, in an organ-specific way, depending on the time of the exercise. Insights include how to realign 'faulty' circadian rhythms by adopting the right exercise.

A team of researchers from North Carolina State University's Plant Disease and Insect Clinic has discovered a jumping behaviour that is entirely new to insect larvae, and there is evidence that it is occurring in a range of species. The previously unrecorded behaviour occurs in the larvae of a species of lined flat bark beetle (*Laemophloeus biguttatus*). Specifically, the larvae are able to spring into the air, with each larva curling itself into a loop as it leaps forward. While there are other insect species that are capable of making prodigious leaps, they rely on something called a "latch mediated spring actuation mechanism". This means that they essentially have two parts of their body latch onto each other while the insect exerts force, building up a significant amount of energy. The insect then unlatches the two parts, releasing all of that energy at once, allowing it to spring off the ground.

U.S. President Joe Biden and Japanese Prime Minister Fumio Kishida agreed to "push back" against China and condemned North Korea's spate of missile tests, while Biden underlined U.S. commitment to defending Japan, in virtual talks.

The Taliban's first official talks with the West on European soil since seizing power in Afghanistan will help to "transform the atmosphere of war" after a two decade insurgency against NATO forces, the group's top spokesman. No country has yet recognised the Taliban's government — notorious for human rights abuses during a first stint in power between 1996 and 2001 when they were ousted by a U.S. led invasion.

A month after the Central Public Works Department (CPWD) released revised accessibility guidelines, disability rights activists have raised concerns over the changes, including in handrail heights, from the 2016 version, as well as sought clarity from the government on which version would be applicable

## BLACK HOLE IGNITES STAR FORMATION

1. NASA's Hubble Space Telescope finds a black hole igniting star formation in a dwarf galaxy. Often portrayed as destructive monsters that hold light captive, a **black hole at the heart of the dwarf galaxy Henize 2-10 is creating stars rather than gobbling them up. [This dwarf galaxy lies 30 million light-years away, in the southern constellation Pyxis.]**

2. The black hole is apparently contributing to the firestorm of new star formation taking place in the galaxy. Outflow of gas - An outflow of gas from the black hole stretches across space like an umbilical cord to a bright stellar region that is located 230 light-years from the black hole. Hubble spectroscopy shows the outflow was moving about 1 million miles per hour, slamming into the dense gas. Newborn star clusters dot the path of the outflow's spread, their ages also calculated by Hubble.

3. This is the opposite effect of what's seen in larger galaxies. In larger galaxies, the material falling towards the black hole is whisked away by the surrounding magnetic fields, forming blazing jets of plasma moving at close to the speed of light. Significance of Dwarf Galaxy-**Black Holes The black hole in Henize 2-10 is around 1 million solar masses. In larger galaxies, black holes can be more than 1 billion times our Sun's mass.**

4. More massive the host galaxy, more massive the black hole at its centre. Current theories on the origin of supermassive black holes break down into three categories: They formed just like smaller stellar-mass black holes, from the implosion of stars, and somehow gathered enough material to grow supermassive, Special conditions in the early universe allowed for the formation of supermassive stars, which collapsed to form massive black hole "seeds" right off the bat, or The seeds of future supermassive black holes were born in dense star clusters, where the cluster's overall mass would have been enough to somehow create them from gravitational collapse.

5. So far, none of these black hole seeding theories has taken the lead. Dwarf galaxies like Henize 2-10 offer promising potential clues, because they have remained small over cosmic time, rather than undergoing the growth and mergers of large galaxies like the Milky Way. Astronomers think that dwarf galaxy black holes could serve as an analog for black holes in the early universe, when they were just beginning to form and grow.

## PUMA

1. A new study has found that the pumas maintain relationships with an astounding 485 living species and play a critical role in holding ecosystems together throughout the Western Hemisphere. Pumas (*Puma concolor*), a member of the family Felidae, is also called mountain lion, cougar, or catamount (archaic).

2. It is a large brownish New World cat comparable in size to the jaguar - the only other large cat of the Western Hemisphere. Distribution - Puma has the widest distribution of any New World mammal. They are found across 28 countries in the Americas. But, they are poorly understood and thought to be declining overall.

3. Habitats - **Pumas live in a variety of habitats, including desert scrub, chaparral, swamps, and forests. But, they avoid agricultural areas, flatlands, and other habitats lacking cover (vegetative or topographic).** The species is elusive and often mischaracterised as a vicious, solitary predator, leading to persecution and fuelling human-puma conflict.

4. Threats - In the United States, pumas are threatened by habitat loss and fragmentation, road mortality and disease; some populations are further impacted by legal hunting as well. In Latin America, the species faces the same threats, along with illegal hunting, which is generally retaliatory killing by ranchers over livestock and loss of prey.

5. Findings - **The new study identified 203 species as puma prey, 281 species that feed upon puma prey in scavenger communities and 12 species as puma competitors. Pumas maintain a 'fear effect' on 40 species, such as vicuña and white-tailed deer.**

6. The presence of pumas frightens herbivores from certain landscapes, preventing them from overgrazing plant communities. Ecosystem services that pumas provide, defined as benefits supporting human economies, health and well-being, are often inconspicuous, according to the study.

for auditing public buildings.

The Gati Shakti programme announced by Prime Minister Narendra Modi last year envisages a digital platform for a national master plan of infrastructure projects in the country which will be ready by March 31, 2022, according to a senior government official. "All infrastructure projects will be mapped on the national master plan [portal]. 75% of data from Central Ministries on their infrastructure projects have already been uploaded. We are now training State governments to share their data. We are hopeful that the national master plan [portal] will be ready by Marchend," Amrit Lal Meena, Special Secretary, Department for Promotion of Investment and Internal Trade told.

## QUAD GROUPING

- 1.The quadrilateral security dialogue includes Japan, India, United States and Australia. All four nations find a common ground of being the democratic nations and common interests of unhindered maritime trade and security.
- 2.Genesis: **The grouping traces its genesis to 2004 when the four countries came together to coordinate relief operations in the aftermath of the tsunami.**
- 3.It then met for the first time in 2007 on the sidelines of the Association of SouthEast Asian Nations (ASEAN) The intention was to enhance maritime cooperation between the four nations.