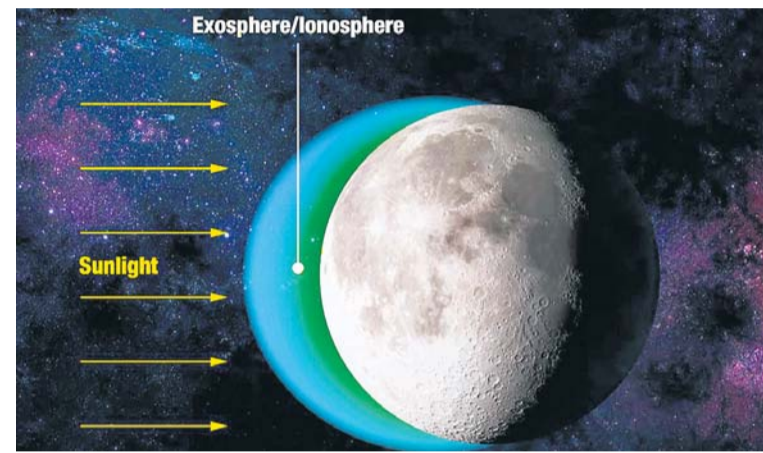


#SCIENCE

The moon has an atmosphere (sort of)

A lunar atmosphere is not really an atmosphere. Scientists call it an exosphere.



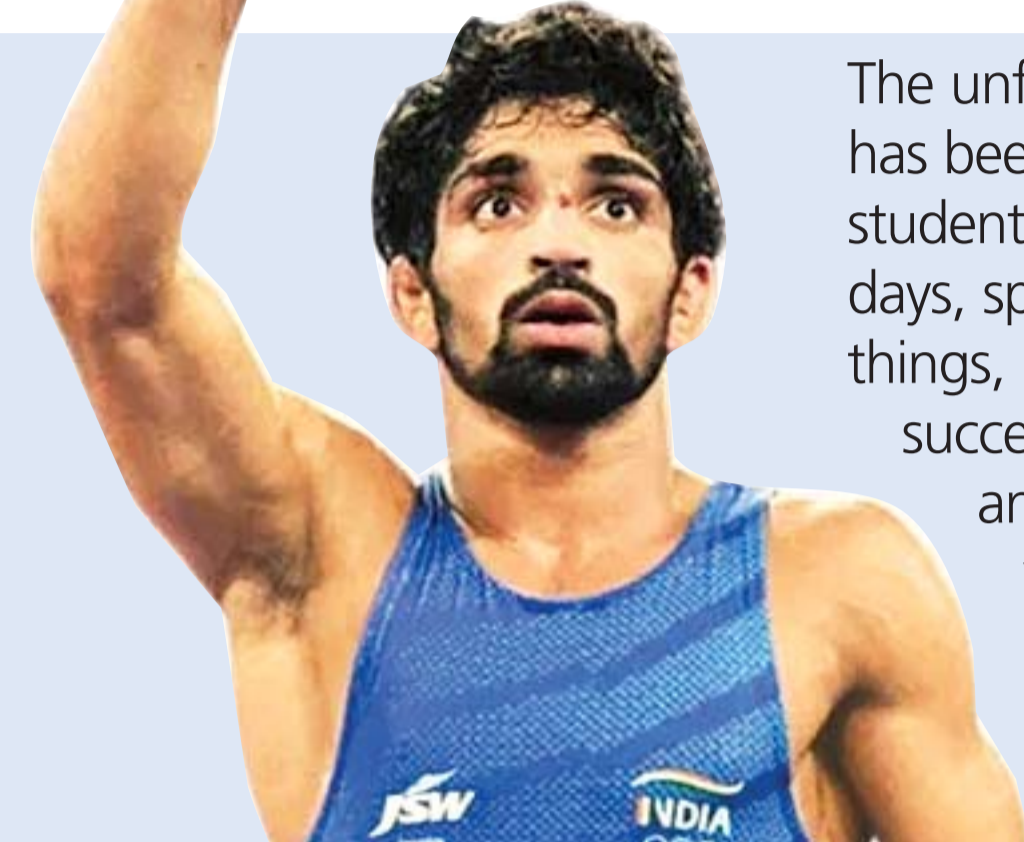
The moon may be our constant companion, but there's still a lot that we have to understand about it. For example, it was only during the Apollo missions in the 1960s and '70s that we discovered that it has an atmosphere, tenuous as it is. "People do not even know that the moon has an atmosphere," said Nicole Nie, an assistant professor in MIT's Department of Earth, Atmospheric and Planetary Sciences and the author of a new study about the moon. "Technically speaking, a lunar atmosphere is not really an atmosphere. (As) scientists, we call it an exosphere, just because it's very, very thin. But it's there, and scien-

Getting into the dirt

The main driver for the lunar atmosphere was believed to be something called *space weathering*, which includes the vaporization of the lunar surface as meteorites slam into the moon. Another factor is ion-sputtering, which comes from the sun's solar wind, a flow of particles that travels outward into the solar system at around 1.6 million km/h. Scientists believe that as the charged particles carried by the solar wind reach the moon, they hit the surface and then transfer energy to the atoms contained in the soil, sending those atoms sputtering about, which ends up creating a thin atmosphere. They concluded that the regolith held mostly the heavy isotopes of both elements, and that vaporization of these rocks was likely the main process by which the atoms are sent upward (think fast, hot rock slamming into more rock). And since the moon is constantly being pelted by even small meteorites, called micrometeorites, this thin atmosphere is just replenished again and again. This is important because with ion-sputtering, most of these atoms would escape into space. However, with meteorites vaporizing the rocks, the majority would remain. In fact, the recent study found that 70 per cent of the lunar atmosphere is a result of these meteorite impacts.



There Is A Hunger In This Man...



The unfortunate Wrestling Federation of India has been doing anything but training its students. Their efforts and time is, these days, spent in politicizing, or defending things, not wrestling. Our lack of success, this time over, is no secret and also its cause. True, when your eye is not focused on the fish's eye, this is the result. Although, it is obvious that we have the talent.



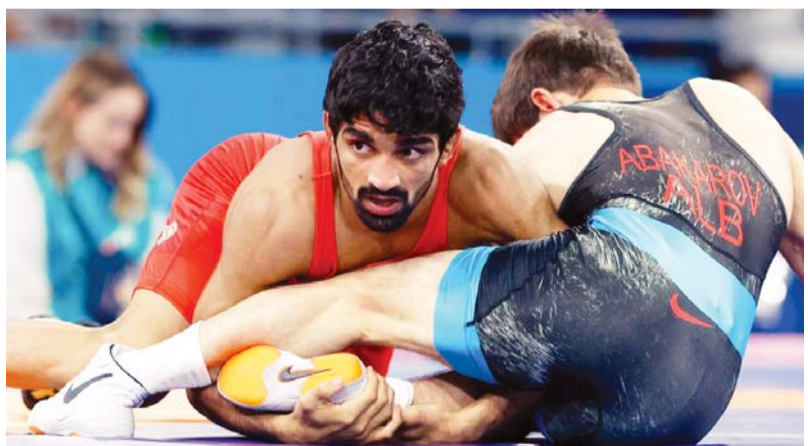
Anjali Sharma
Senior Journalist &
Wildlife Enthusiast

There is a hunger in this young man. He doesn't have a mother to fret over him, and pray for his success, or a father to worry and plan for his future. He, too, does not, he has never been used to look over his shoulder and wait for any help. He gets up and does it anyway. A single-minded devotion to his game has 'earned,' literally earned him a medal. A lesson taught to Arjun, a fortunate with really high caliber mentors, was, "Look the fish in the eye, that is the whole world for you, nothing else exists. In this young man, it is visible."

Aman Sehrawat didn't brood. On Thursday (August 8, 2024) evening, up against former Olympic silver medalist, Rei Higuchi in the semifinals, he barely lasted a round. In no time, he trailed 10-0 and the bout was stopped, the Japanese declared winner by technical superiority. There was no time for self pity. The 21-year-old rushed out and began his weight control regime. He had 1.5 kg to lose before Friday (August 9, 2024) morning's weigh-in so that he could make weight for the bronze medal bout. Aman wasn't

taking any chances. He pulled on his black sweatshirt and headed to the mat in the training hall. He shadow practised for the next hour and a half. Then, he hit the gym. When he stood on the scales three hours later, he saw what he was looking for: 56.80. He didn't drink nor eat, but importantly, he went to bed believing. "It was hard but not anything more than what he can do. This is what we do," said coach, Virender Singh. Only after he passed his weigh-in did Aman drink something. By evening, he was ready to go. That sucked for his opponent Darian Toti Cruz of Puerto Rico. A former collegiate champion in the U.S., he is good. But the Indian had a hunger that would not be satiated by food.

Cruz puts up a challenge early on and even led 3-2, but Aman was relentless like a pitbull. He keeps handfighting, snapping Cruz's neck down and sapping his energy. As the fight wore on, the Indian's pace took its toll. A close fight at 6-5 became a blowout as Aman racked up take-down after take-down to win 13-5. Aman, thus, joins an elite list of men's Olympic wrestling medalists including two time Olympic medalist, Sushil Kumar; 2012 bronze medalist, Yogeshwar Dutt, Tokyo silver medalist, Ravi Dahiya and bronze medalist, Bajrang Punia. At the age of 21 years and 24 days, Aman Sehrawat bettered PV Sindhu's record of 21 years, one month and 14 days when she bagged the silver medal at the Rio 2016 Olympics. All of them have emerged from an *akhara* that is to Indian wrestling what La Masia is to Spanish football.



No easy days

There are no easy days at *Chhatrasal Akhara* in New Delhi. It is an all-male boot camp. The boys live cramped five or more to a room. In the winter, you shiver. In the summer, you sweat. The place smells constantly of sweat. There's no place for weakness or softness here. If you think that you are special, you will be quickly cut to size. There's always someone as hungry as you. Willing to do more than you. You do what you have to do or you go home. But Chhatrasal isn't just an academy for Aman. It's also home. When he was 11, he was brought there by his uncle. Although, he had wrestled in his village Birohar in Haryana, that wasn't the only purpose he was brought there. He had nowhere else to go. Aman's past is, indeed, painful. When he was 10, his

The unfortunate Wrestling Federation of India has been doing anything but training its students. Their efforts and time is, these days, spent in politicizing, or defending things, not wrestling. Our lack of success, this time over, is no secret and also its cause. True, when your eye is not focused on the fish's eye, this is the result. Although, it is obvious that we have the talent. The Wrestling Federation of India (WFI) has been suspended by the sport's world governing body for not holding elections after its chief was charged with sexual misconduct.

mother died of suicide. His grief-stricken father died the same way a year later. At Chhatrasal, if not a wrestler, he could at least get three meals a day and help out some of the more established wrestlers. Since he arrived at Chhatrasal, Aman's life revolved around training and competition. "He has almost no distractions. He has singular minded focus on training," says Praveen Kumar, one of the coaches at Chhatrasal. "Chhatrasal Stadium is my home. The wrestlers here are my family. If someone comes and asks me to go somewhere for Diwali, I don't agree. I make it clear I'm not leaving Chhatrasal. Now, people also know that this is my mentality. I don't like roaming around or going around Delhi either," says Aman. Aman slowly made a name for him-

Why such a small presence?

India's top wrestlers staged weeks of sit-in protests in New Delhi, this year, to demand the resignation of WFI President, Brij Bhushan Singh. The 66-year-old, also a lawmaker for the ruling Bharatiya Janata Party (BJP), has since been charged with sexual harassment and stalking, and is currently free on bail. The federation's leadership was disbanded in the wake of the scandal, with fresh elections scheduled for earlier this



Wrestlers and supporters arrested

Singh has a criminal record dating back to the 1990s. He still has four criminal cases pending against him, on charges that include theft, attempted murder and illegal payments in connection with an election. Several top wrestlers were charged with rioting and disorder, after being arrested during a protest against him, in May. Images of star athletes being detained by police, as they tried to march to parliament, went viral on social media. Several of their supporters were also arrested after scuffles with police broke out in front of parliament. Indian wrestlers, then, vowed to take the matter to court. Olympian Vinesh Phogat, one of the athletes who led the protests, told *Al Jazeera* that several sexual harassment cases have been previously reported against Singh, but he either made the charges disappear or ensured that the complainant did not compete again. Wrestling is popular in rural northern India. In the 76 years since India's independence, it has won 21 medals in individual sports, seven by wrestlers. Wrestler Anita Sheoran, who has won a Commonwealth Games gold and is a witness in a sexual harassment case, has filed her nomination to replace Singh in the top post. But backers of Singh, whose family is prohibited from contesting the elections, had been expected to win an election, which was held on September 23 in Hangzhou, China. Following is the timeline of the chain of events leading up to the suspension of the Wrestling Federation of India (WFI) on Sunday by the Sports Ministry. It charts all the important events dating back from January 18, when the wrestlers began their protest at Jantar Mantar to the suspension of the Sanjay Singh-led WFI panel, which was elected on December 21.

Family Fun Month



Families have been having fun together for generations. Perhaps, dating back to caveman times, when they would play music, tell stories and play games, fun has been an important part of the human experience and quality of life. Today, some families may have a tendency to be a bit serious, working hard at jobs or school, so, they might need a reminder to go out and enjoy themselves. And that's what Family Fun Month is all about. Create lasting memories with activities that bring laughter, strengthen bonds, and fill your home with joy.

#OLYMPICS



January 18: Wrestlers begin protest at Jantar Mantar, accuse WFI chief, Brij Bhushan Singh Sharan, of sexual exploitation and intimidation, demand his resignation and dissolution of WFI. January 19: CWG champion wrestler and BJP member Babita Phogat meets wrestlers, says that she will speak to the government. January 20: Wrestlers write a complaint letter to IOA president, PT Usha, demand the formation of an inquiry committee to probe the allegations and appointment of a new committee to run WFI. IOA forms a seven-member committee, including MC Mary Kom and Yogeshwar Dutt, to probe the allegations of sexual harassment. January 21: Wrestlers call off protest after meeting Thakur. Sports minister says that an Oversight Committee will be formed to probe the allegations and Brij Bhushan will step aside till the probe is completed. January 23: Sports Ministry asks WFI to suspend all ongoing activities with immediate effect and schedule emergency AGM meeting of WFI. Assistant secretary of WFI, Vinod Tomar, gets suspended. January 25: Forams 5-member Oversight Committee (OC), led by Mary Kom, to look into the allegations. OC given 4 weeks to complete probe. January 24: Protesting wrestlers express disappointment that they were not consulted by the government on the choice of the OC members. February 23: OC's tenure extended by two weeks. May 7: WFI announces election on May 7 after the OC's report is submitted to the Sports Ministry. Report is not made public. April 23: Wrestlers return to Jantar Mantar, say that 7 female wrestlers, including a minor, have filed a sexual harassment complaint against Brij Bhushan. Claim that police has not yet registered an FIR. Wrestlers ask Sports Ministry to make OC's findings public. April 24: Sports Ministry stalls May 7 elections. Asks IOA to constitute an ad-hoc body to conduct the polls within 45 days of its formation. April 25: Wrestlers move Supreme Court, seeking registration of FIR against Brij Bhushan. SC issues notice to Delhi police. April 27: Formation of 3-member panel by IOA. May 3: Scuffle breaks out between the wrestlers and Delhi Police, leading to head injuries to a couple of protesters. Protesters accuse 'drunk officials for manhandling' them and 'misbehaving' with the female wrestlers. The altercation led to detention while some wrestlers also sustained injuries. May 4: SC closes proceedings on a plea by women wrestlers, who levelled sexual harassment charges after noting that FIRs have been registered and the 7 complainants have been provided adequate security.

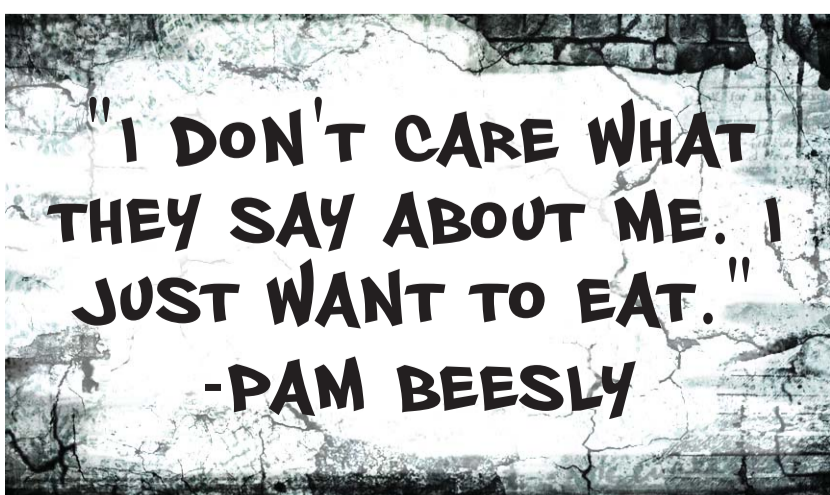


June 19: IOA ad-hoc panel calls five disaffiliated State Wrestling Units for hearing on June 21. June 21: The IOA ad-hoc panel reschedules WFI elections to July 11 after five disaffiliated state bodies, seeking voting rights for the polls, present their cases in hearing. June 22: The IOA ad-hoc panel reduces Asian Games and World Championship selection to a one-bout contest for six protesting wrestlers. June 23: Several coaches, parents of wrestlers demand withdrawal of exemption given to six wrestlers. June 25: The Gauhati High Court stays WFI elections, scheduled for July 11, on a petition filed by the Assam Wrestling Association. July 18: Delhi court grants interim bail to Brij Bhushan, Bajrang and Vinesh get direct entries into the Asian Games. July 19: Young wrestlers hit Hisar streets to protest against 'unfair trial exemption.' WFI election scheduled for August 7. July 20: Many junior wrestlers, their parents and coaches reach IOA headquarters, demand withdrawal of exemption granted to Vinesh and Bajrang. WFI election rescheduled for August 12. August 11: Punjab and Haryana High Court stay WFI elections scheduled for August 12, following a petition filed by the Haryana Wrestling Association. August 23: Wrestling world body, UWW, suspends WFI for not conducting its elections on time. December 5: WFI elections scheduled on December 21. December 21: Sanjay Singh, a Brij Bhushan loyalist, elected as the new WFI chief. December 21: Bajrang and Sakshi hold press conference where the latter quit wrestling in protest against Singh's election. December 22: Bajrang returns Padma Shri in protest against Sanjay Singh's election. December 24: The Sports Ministry suspends WFI till further orders after the newly-elected body made a 'hasty announcement' of organising the U-15 and U-20 nationals 'without giving sufficient notice to wrestlers' to prepare.

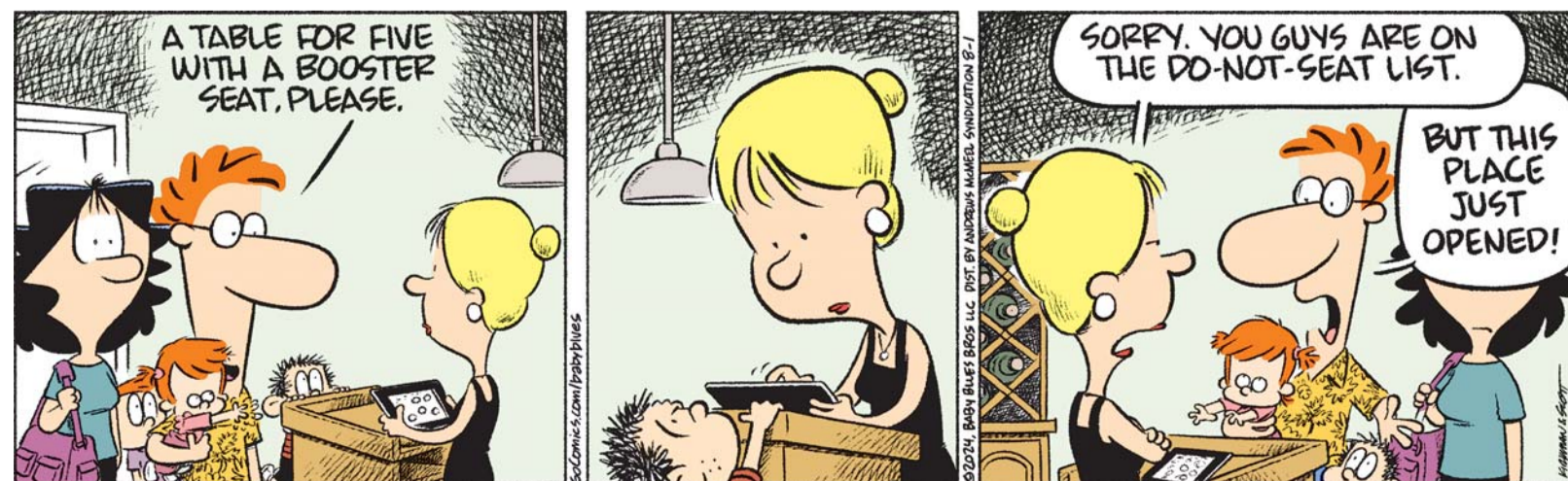
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THE WALL



BABY BLUES



By Rick Kirkman & Jerry Scott

ZITS



By Jerry Scott & Jim Borgman