ARBiT
it happens here...

International Youth Day

Youth Day presents an opportunity for every country to assess their investment in and commitment to youth, as well as general education (both of and to youth). Endorsed by the United Nations in 1999, the first International Youth Day took place in the summer of 2000. Although its purpose was certainly meant to inspire and encourage leaders of countries to be aware of issues related to youth, its sentiment can be passed down far away from political leaders and into the culture of each land's up and coming generations.

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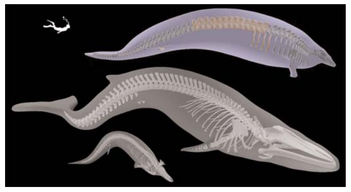
SATURDAY
12 August 2023
A-B

#PALAEONTOLOGY

The 'Chonkiest Whale Ever'

And maybe the heaviest animal the world has ever seen.



Thirteen years ago, palaeontologist Mario Urbina made a remarkable discovery in the coastal desert of Peru. He had a hunch that it was something really special.

But his conclusion was so odd that it took years of excavation and testing to show international scientists that his convictions were right, according to Urbina's field partner and fellow palaeontologist Rodolfo Salas-Gismondi, head of the vertebrate palaeontology department at the Museum of Natural History in Lima.

They were fossil masses, and what Urbina thought they were: preserved bones from a new species of early whale, dating to 39 million years ago. And, it turns out, this one was a whopper.

"The authors have definitely found something new. This is a really weird, stupendously large, early whale," says paleobiologist Nicholas Pyenson, the curator of fossil marine mammals at the Smithsonian National Museum of Natural History.

This whale relative, named Perucetus colossus—"the colossal whale from Peru"—is pretty darn big. The international team of researchers posit that it could be the heaviest animal. Ever.

By their estimates, the species would have had a 65-foot skeleton that outweighs the 82-foot skeleton of a blue whale—the world's current heavyweight champion species—by two to three times, possibly resulting in an overall body weight of between 90 and 370 tons.

At the upper range, that's more than twice as chonky as a blue whale. Further, this ancient giant falls far earlier in history than scientists would expect, changing the known evolutionary timeline for huge whales up by 30 million years.

"Besides the Guinness Book aspect of it, from a scientific perspective, the most important part is the understanding of what conditions can yield extreme gigantism," says co-author Eli Amson, of the State Museum of Natural History in Stuttgart, Germany. "This changes a lot of our understanding of gigantism and basically provides another evolutionary path to it."

P. colossus is one of the earliest whales that fully transitioned from land to water in the middle Eocene, about 40 million years ago.

More than its overall size, the bones of this species are extremely dense. It has an extra layer of bone on the outer surface of the skeleton (pachyostosis), and the inner cavities are filled with compact bone (osteosclerosis).

These dense features are seen in other shallow-water animals, such as manatees, and allow them to control their buoyancy. In contrast, today's biggest whales have lighter bones, which are better suited for deep diving.

The preserved bones have taken over a decade to excavate from a 100-foot hill.

The skeleton is partial—missing the skull, in particular—so Pyenson is more confident about estimating length than weight. "Length estimates are more reliably reconstructed from incomplete material," he says.

"What is much harder is weight. I am skeptical of some of the larger size estimates because they place it in a body size category for which we have no comparison."

Regardless of superlatives, the findings add to researchers' understanding of evolution, which can help us look toward the future, says Pyenson.

There's a bit of Cillian in all of us

You can only imagine the level of humbling irony it was for me when I realised that I had gone through Red Eye, Breakfast on Pluto, and the entire stretch of A Quiet Place 2 with the half-baked knowledge that the C in 'Cillian' is not enunciated like an S, but actually as a K. But here is a lesson from Mr Murphy for those of us who lose our cool on being called by the wrong name.

Shreya Teresite

#MOVIES

Ever since Christopher Nolan's Oppenheimer hit the theatres, actor Cillian Murphy has become the talk of the town. Some are hailing him for his acting chops, while others are miffed about a certain scene in the movie that did not suit us well. But for those of us who can look beyond the picture screen and look into this dashing Irish man we could find quite a few things in common with him. Things that could make you crack a smile on a drab day.

Cillian with a K

A lion's share of my life has been dedicated to fixing the pronunciation of my name on other people's tongues. I have heard everything from teachers in kindergarten refusing to budge from 'Shre-ha' to colleagues who insist on calling me 'Shreeeya', to even an Austrian teacher back in high school who once wondered aloud if my name was a twisted rendition after the Nordic goddess' name, Freya Sigh.

So, you can only imagine the level of humbling irony it was for me when I realised that I had gone through Red Eye, Breakfast on Pluto, and the entire stretch of A Quiet Place Part II with the half-baked knowledge that the C in 'Cillian' is not enunciated like an S, but actually as a K. But here is a lesson from Mr Murphy for those of us who lose our cool on being called by the wrong name.

In a recent interview with GQ magazine, when asked how often people mistakenly call him 'Sillian', Murphy responded that it was actually "less and less now". He also (very humbly, might I say) added that it does not bother him, though he did admit to "very pedantically" explaining to people that the Irish language does not have the letter 'K'. He, very rightfully so, added that this explanation gets "really boring". So, think of it that way when someone mispronounces your name next time; maybe it was not a subtle microaggression after all, but simply a boring teaching opportunity.

Feeling like an interloper

It is not uncommon knowledge that Cillian Murphy is a very proud Irishman. So much so that the Peaky Blinders star actually left London, where he had lived for over a decade, and moved his whole family - that is, his wife Yvonne and their two sons, Malachy and Aran - back to Dublin, Ireland, in 2015. Why? Well, he had quite a few reasons to list, one being that he did not appreciate his kids picking up "very posh English accents". However, Murphy did later admit in a separate interview with GQ that he meant that comment as a joke. For what it is worth, though, as acidic as it may seem to the ear, I can half-heartedly see his point. Especially when I think of my Mumbai and Delhi-bred Bengali friends speaking in Bangla.

Murphy also explained that it was kind of a common narrative for people from his country to "move away, do your thing and come home", and how it felt nice to move back home considering his parents were at a certain age. Raise your hand high (like you are Hermione Granger in Potions class) if that is your retirement plan as well.

But all in all, it was something else in that interview with the Armchair Expert podcast that pulled me in; something that many of us millennials living far away from home for the sake of our careers can strongly relate to.

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When asked if he could see himself dwelling in a city like Los Angeles, Murphy confessed that while he loved visiting there, he would feel like "a bit of an interloper" as a resident in California. Again, I see myself in that confession - and in that one word itself - as someone who, after eight long years, still feels like an outsider and struggles to find their footing in a different city away from home.

Not a great 'craic'

Let me veer your attention away from the Cork-born actor for a moment and point you toward a different Irish city called Derry - or Londonderry if you too wish to be pedantic - where the lovable Netflix show Derry Girl sis based. The show, which spins a delightful teen comedy with a backdrop of the rough final years of the Northern Ireland conflict in the 1990s, has a handful of these chief Irish terms that are quite often repeated throughout the series. One of them is 'craic' or - sometimes used as - a 'craic-killer'.

Having been primarily taught British English in school and having spent a good chunk of my adult life numbing my brain with American sitcoms, I had absolutely no idea what this term meant. So, of course, I hit pause on the show and turned to Google. And to my surprise, searching 'craic' actually pulled up a trending story under the news section, where Cillian Murphy is quoted saying how he "wasn't a great craic to hang out with" when he was shooting Oppenheimer.

In case you are wondering, craic basically means 'an enjoyable social activity', like perhaps a dinner with friends or a party, perhaps. In Derry Girls, the character of Michelle (Jamie-Lee O'Donnell) calls Clare (Nicola Coughlan) a 'craic-killer' because she can often be seen as the paranoid and extra-careful one who cannot relax enough to have fun.

Reading about how Cillian Murphy felt he was not much of a 'craic' to hang out with not only felt like a great hat-tip to a different story/show that was so dear to me but was also very relatable on a personal level. The relevance of this explanation mounts further when you take into account how easy it would be for gossip columns to twist this narrative to make Murphy look like a snobby actor. But as he and his co-stars clarified, it was the "monumental" pressure of the role (and the need to stick to a certain diet) that often made Murphy choose solitude over having a good time. I personally feel that there are one too many of us who can relate to this need to isolate when it comes to giving everything you have to a certain job. Even if it means being a craic-killer at times.

Channelling Cillian's Ken-ergy

The perceived box office competition between Oppenheimer and Greta Gerwig's Barbie has been amped up by the masses ever since their shared release date was announced months ago. However, it eventually morphed into this bizarre string of parallels drawn between the two polar opposite movies, most commonly through merchandise and memes. This social media phenomenon, which has been reigning the internet for quite some time now, has even been dubbed as the "movie event of the year" and rallied under the concocted portmanteau of "Barbenheimer".

Apart from being a fun social media event, this is also an apt example of successful counter programming, which is a marketing strategy often used by studios to release two totally different movies on the same day.

So, of course, interviewers reached out to the actors and directors of both Oppenheimer and Barbie to see their reaction to this counterprogramming strategy and the overall internet hype of Barbenheimer. And when Cillian Murphy was questioned if he would ever consider playing Barbie's 'boyfriend' Ken (a role spectacularly portrayed by Ryan Gosling in the latest Gerwig movie), he did not shy away from admitting that he would be thrilled.

In an interview with Cinefilos, Murphy noted that he would be open to reading the script and having a conversation about playing Ken in a sequel to Barbie. He also added that he is keen on watching the movie and sounded positively pumped about the "great movies happening this summer."

Now, let us, of course, take this response with a grain of salt; he probably was just being sporty and nice about the movie, and perhaps did not genuinely mean what he said about playing Ken. Nonetheless, this is a response that deserves its own moment in the sun.

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Imagine Cillian Murphy, the guy known for playing the DC Comics Super villain Scarecrow in the Batman Begins series or the sinister assassin chasing Rachel McAdams in Red Eye, personalising the lovable, funny and goofy character of the Ken doll. Wouldn't that be a sight to behold? Perhaps, with his piercing blue eyes and haunting poker face, he would bring forth a fresh type of Stoic Ken that we have not had the luck to explore in this Barbie movie.

But then again, to think that Cillian Murphy's repertoire is just about his poker face and grim, piercing gazes, or just serious, method acting is sorely incorrect. A simple glance through his filmography will clear the misconception quickly.

A role of a lifetime

Oppenheimer is being dubbed by many as Cillian Murphy's best work so far - or a role of a lifetime, as some like to put it. By the grade-A level performance that every actor in the movie has put in and its overall box office performance, it is a safe assumption to make. However, in an interview about two decades ago, Murphy himself gave this title to a different movie.

In 2005, Cillian Murphy acted in a film called Breakfast on Pluto, directed by celebrated filmmaker and fellow Irishman Neil Jordan. Based on a 1998 novel of the same name by Irish writer Patrick McCabe, this movie saw Murphy play the role of a transwoman who, while in search of her long-lost biological mother, goes through a myriad of atrocities and experiences as she makes her way through London and war-torn Ireland in the 1970s.

The timeline of when this movie came into being is essential. Notably, this was before the conversation around cis-gendered actors playing trans characters had received proper prominence in the English film industry. Secondly, Breakfast on Pluto happened pretty much right after Murphy had played two very ruthless characters on screen (in Batman Begins and Red Eye).

So, when this actor, who was known largely for his stone-faced charisma and fairly masculine roles, suddenly appeared on screen as the delicate, love-struck orphan child Patricia "Kitten" Brady, it took many by surprise and left the rest of us in awe.

In an interview he gave to black-film.com the year the movie was released, Murphy noted that he "would very happily say that" the title of the role of a lifetime applied to this film for him. To prepare for the role of Kitten, director Neil Jordan had advised him to treat himself "like a lady", while Murphy "wanted the character to be feminine as opposed to effeminate".

Murphy spent a lot of time in clubs around London to prepare for the role, meeting trans people, doing his research and taking notes. In his interview with blackfilm.com, he stressed that to him, it is "obvious" that in order to play a character, an actor must "amass information about that person", their environment, or the era that they are from. On a side note, while this practice of thorough research may be important and obvious to great actors like Cillian Murphy, it is ridiculously common to find their lazy contemporaries who end up playing LGBTQI+ characters in inaccurate and disrespectful light because they never bother to do even an inch of research.

Murphy's research, on the other hand, helped him pick up subtle cues and body language, something that must have surely helped him make the character of Kitten come alive in such an organic and effortless manner, instead of being forced and over-the-top. He even noted in the above-mentioned interview how plucking of the brows was the "worst", although he did enjoy "looking pretty. On that note, let us also take a moment to appreciate the beautiful smile from an actor who is way too often remembered just for his hard stares.

Love for the craft

One of the chief aspects of Breakfast on Pluto is Kitten's repeated mentions of how everybody is too "serious, serious, serious", which is an ironic stand to take considering her story takes place against the backdrop of the violent Northern Ireland conflicts. But Murphy's take on his character is that Kitten is actually "very astute and very smart" and that she knows exactly what is going on around her. Her persona of taking things lightly, according to him, is simply a "defense mechanism to pretend all this stuff isn't happening".

An insight of such a measure comes from a place of deep love and understanding for a character, and it is something that you can find in his portrayal of other characters as well. Be it the young Irish traveller exploring the alien world of America in the 1999 film Sunburn (where you may find him looking extremely like young Timothy Chalamet) or the scientist in crisis in Oppenheimer.

For Oppenheimer, Murphy's special diet - which reportedly included a lot of just almonds - for this role has been talked about quite a lot since the movie came out, but what has not made headlines as much is how he described the purpose behind his diet. In a few interviews, he painted a picture of how the American theoretical physicist's diet consisted largely of alcohol and cigarettes, which had an impact on his physique, and how his clothes hung from his body in a certain way - which is what he was trying to copy (and seemingly did so successfully).

This sort of deep insight into his roles, into the minds of the characters that he plays, is something that only people who love their work immensely relate to. For most of us, there is a job that pays the bills and EMIs, and then there is a hobby/passion that breathes life into our souls during the weekends. For a lucky few, their passion is their job. Through back-breaking hard work and/or a streak of luck, they have been able to mint a stream of steady income by doing what they are passionate about. And because they love what they do, their work always has a certain edge of brilliance and dedication that cannot be found in the jobs done by those doing it just for a living, no matter how diligent they are. This love for the craft is what sets people like Cillian Murphy apart from the crowd.

rajeshsharma1049@gmail.com

#SECURITY SYSTEM

Battery Sleuth To Stop Car Theft

Battery Sleuth bypasses both the wireless communication that key fobs depend on and the standardized on board communication network that's used in today's vehicles.

A new solution to car theft leverages perhaps the lowest-tech feature of today's vehicles—the auxiliary power outlet, known to those of a certain age as the cigarette lighter.

Skyrocketing vehicle theft rates in some cities have drawn attention to an inconvenient truth: the increasing amount of technology in our vehicles can make them increasingly vulnerable to hacking or theft.

The researchers are set to begin large-scale testing of Battery Sleuth, a vehicle security system that can protect against sophisticated wireless hacking, old-school jimmying, and everything in between.

Battery Sleuth bypasses both the wireless communication that key fobs depend on and the standardized on board communication network that's used in today's vehicles.

Instead, it authenticates drivers by measuring voltage fluctuations in a vehicle's electrical system. Drivers interact with it through a keypad device plugged into the auxiliary power outlet.

"The great thing about the power outlet is its simplicity—it's just a wire connected to the battery, so there's nothing to hack," says Kang Shin, professor of computer science at the University of Michigan and lead researcher on the project. "And creating voltage fluctuations with components like windshield wipers or door locks is even simpler."

Battery Sleuth delivers a predetermined series of voltage fluctuations—a sort of "voltage fingerprint"—to the car's electrical system when the driver enters a numerical code into the keypad device.

A receiver then recognizes this fingerprint and enables the vehicle to start. Drivers can also deliver the voltage fluctuation manually using auxiliary functions that draw battery power.

They might perform some combination of flicking the windshield wipers, turn signal, or headlights on and off, or locking and unlocking the doors. Installed between a vehicle's battery and the car's electrical system, Battery Sleuth's default mode allows the battery to deliver enough current to power systems like electronics and lights, but not enough to power the vehicle's starter.

Only when it detects the pre-set series of voltage fluctuations in the vehicle's electrical system does it turn up the juice, allowing the battery's full power through to the starter.

"The idea of measuring fluctuations in a car's electrical system seems simple, but designing one device that can do it accurately on thousands

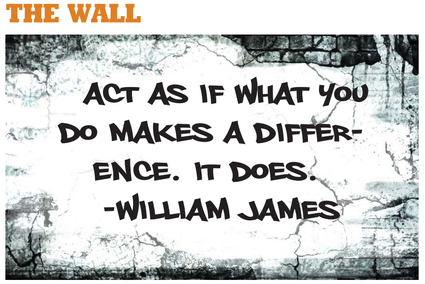
of different vehicle models in varying environmental conditions gets quite complicated," says Liang He, assistant professor of computer science and engineering at the University of Colorado, Denver and a researcher on the project.

"We're working to design a system that's smart enough to measure the parameters of the vehicle it's installed on and then customize itself to work effectively on that vehicle."

Battery Sleuth also has defenses to guard against hacking or physical attacks on the device itself, including a siren that sounds if illegitimate activity is detected and a resistor that shuts down the vehicle's electrical system if an unauthorized power source is connected to the vehicle.

The system is designed to work as either an add-on to existing vehicles or a permanently installed component on new vehicles.

THE WALL



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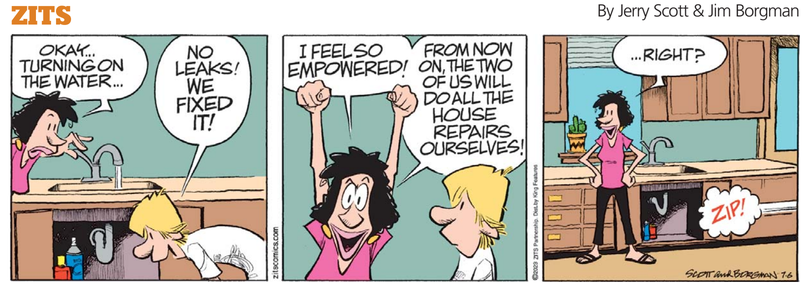
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