Ode to E Pluribus Unum for Sunday May 11 2025

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Remembering Yarnell (30x40)

By Barbara Medaille

The Yarnell Hill Fire was a wildfire near Yarnell, Arizona, ignited by dry lightning on June 28, 2013. On June 30, it overran and killed 19 members of the Granite Mountain Hotshots, a group of firefighters within the Prescott Fire Department. Just one of the

hotshots on the crew survived—he was posted as a lookout on the fire and was not with the others when the fire overtook them.

I have no words, John. Just deep gratitude for those people who put their lives on the line to keep the rest of us safe.

When I saw images from that Arizona fire, the painting evolved.

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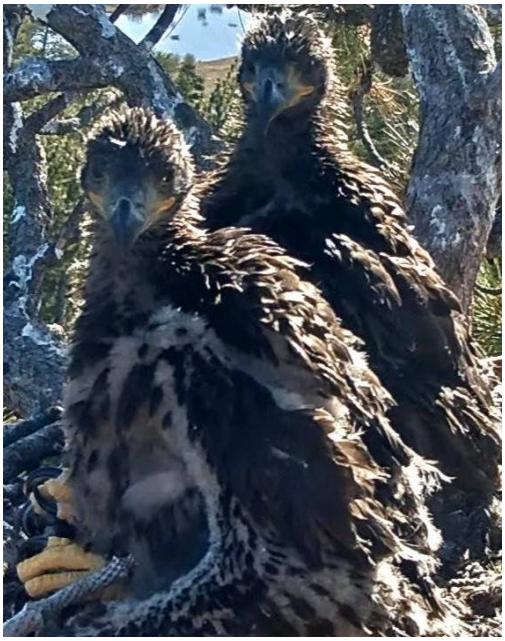
Big Bear Eagle Chicks Are Getting Ready to Spread Their Wings



Friends of Big Bear Valley

It feels like just yesterday that we were on pins and needles waiting for famous eagle couple Jackie and Shadow's eggs to hatch. Now? The two surviving eaglets, named Sunny and Gizmo, are nearing their 2-month birthdays and preparing for their next big milestone: flying.

As seen in live webcam footage from Friends of Big Bear Valley, the siblings have grown larger and shed their light gray feathers for darker ones, all the while being diligently taken care of by their doting parents. Sunny has started hopping while flapping, "working hard to get air time," and Gizmo continues to improve his flapping skills, the nonprofit reported in its eagle log.

While two months may seem fast to start practicing for takeoff, it's right on schedule for the species. Eagles generally take their first flight about 12 weeks after birth, per the Audubon Center for Birds of Prey. Luckily, Jackie and Shadow still have a bit more time before becoming empty nesters, as their little ones will likely spend a couple months honing their flying skills before leaving home between weeks 17 and 23.

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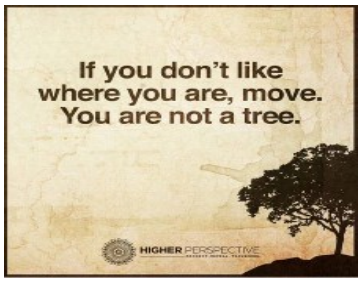

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Chords & Riffs

Claude Debussey (1862-1918)

elpais.com

The French composer whose works were a seminal force in the music of the 20th century, developed a highly original system of harmony and musical structure that expressed in many respects the ideals to which the Impressionist and Symbolist painters and writers of his time aspired. His major works include Clair de lune ("Moonlight," in Suite bergamasque, 1890–1905), Prélude à l'après-midi d'un faune (1894; Prelude to the Afternoon of a Faun), the opera Pelléas et Mélisande (1902), and La Mer (1905; "The Sea").

The main musical influence in Debussy's work was the work of Richard Wagner and the Russian composers Aleksandr Borodin and Modest Mussorgsky. Wagner fulfilled the sensuous ambitions not only of composers but also of the Symbolist poets and the Impressionist painters.

Debussy's music marks the first of a series of attacks on the traditional language of the 19th century. He did not believe in the stereotyped harmonic procedures of the 19th century, and indeed it becomes clear from a study of mid-20th-century music that the earlier harmonic methods were being followed in an arbitrary, academic manner. Hence his formulation of the "21-note scale" designed to "drown" the sense of tonality, though this system was never adhered to in the inflexible manner of the 12-note system of Schoenberg.

In his last works, the piano pieces En blanc et noir, (1915; In Black and White) and in the Douze Études (1915; "Twelve Études"), Debussy had branched out into modes of composition later to be developed in the styles of Stravinsky and the Hungarian composer Béla Bartók. It is certain that he would have taken part in the leading

movements in composition of the years following World War I had his life not been so tragically cut short by cancer.

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Images https://youtu.be/0FOT_xyDDxY?list=RD0FOT_xyDDxY

Arabesque No. 1 https://youtu.be/JCTQTp1PdnA?t=1

Nocturnes https://youtu.be/obv33I2Kf10

Estampes https://youtu.be/Rkno2COmh50

Rêverie https://youtu.be/ouYT5OEPfRI

Claire de Lune https://youtu.be/BubaEmJg4so?t=8

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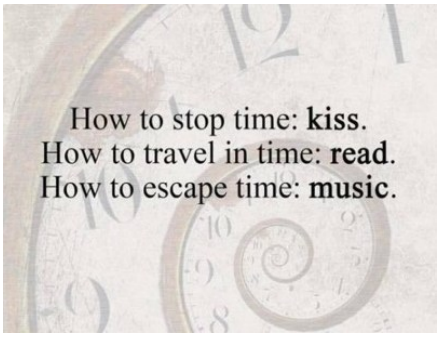

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Undersea Kites Generate Tidal Energy in Denmark's Faroe Islands

Electricity company Minesto harvests energy from ocean and tidal currents using nearly frictionless undersea kites.

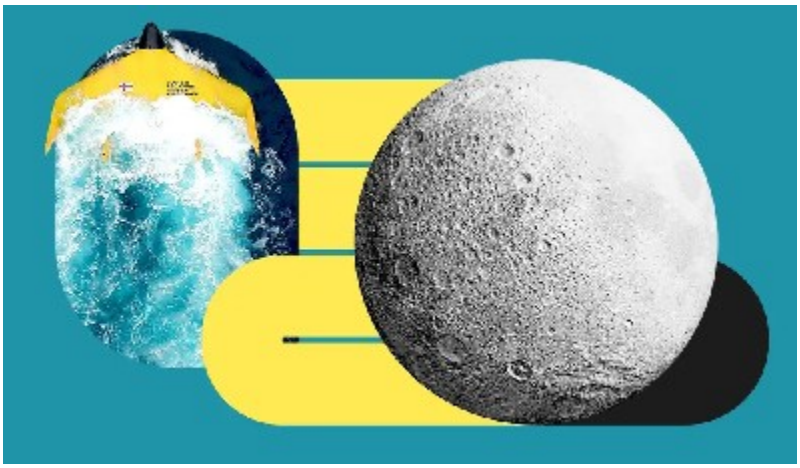

Illustration: Anna Kim, Photos: SKF, Adobe Stock

The kites are part of the Faroe Islands Space Program, which consists of three kites connected to the seabed by subsea cables. Fitted with generators, the kites collect energy from the underwater currents and tides as they move in a figure 8 pattern. That energy then travels through the subsea cables to transformers on the shore of the Faroe Islands, an archipelago that's a territory of Denmark.

The project is the brainchild of Minesto, a Swedish tidal energy company. When complete, the program will consist of six kites with infrastructure connected to the islands' electrical grid, which will provide energy to locals. It's dubbed the Faroe Islands Space Program because tides are considered a lunar resource.

"As long as the moon stays in its orbit," Minesto CEO Martin Edlund told Tech Brew, "we are in production mode."

https://bit.ly/3EZ7VLq

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Joby Completes First Piloted Transition Flights

Electric air taxi manufacturer Joby Aviation completed its first piloted transition flights, demonstrating its ability to shift from vertical takeoff to forward cruise and back.

flightlineweekly.com

Last week, electric air taxi developer Joby Aviation announced that it successfully completed its first piloted transition flights—demonstrating its aircraft's full shift from vertical takeoff to forward cruise flight and back again.

The historic flight took place on April 22 at Joby's test facility in Marina, California, with Chief Test Pilot James "Buddy" Denham at the controls. Denham, a veteran pilot with experience in more than 60 aircraft types, performed a vertical takeoff in Joby's latest aircraft before transitioning smoothly into wingborne flight and landed vertically on the

runway. Since then, Joby said it has conducted multiple successful transitions with three different pilots on board.

Denham said, "Designing and flying an aircraft that can seamlessly transition between vertical and cruise flight has long been considered one of the most challenging technological feats in aerospace, but our team has developed and built an aircraft that makes it feel like an everyday task. The aircraft flew exactly as expected, with excellent handling qualities and low pilot workload."

To prepare for piloted transition flights, Joby conducted thousands of tests in its Integrated Test Lab, simulating real aircraft systems to validate hardware and software performance. The company also ran flight tests at Edwards Air Force Base to verify system redundancy, successfully demonstrating that the aircraft could safely land even with simulated failures.

Joby is still on schedule to deliver an aircraft to Dubai by mid-2025, where it will undergo final flight testing before launching passenger service in the region.

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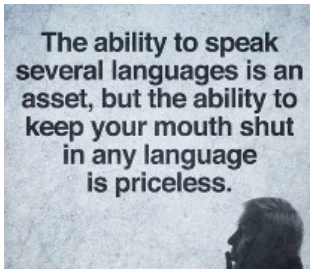

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New Wearable Tech Can Detect Heart Attacks in Real Time

Prostock-Studio/ iStock

When it comes to identifying a heart attack, every minute counts — and according to the British Heart Foundation, every 10-minute delay in treatment can lead to an extra 3.3 deaths per 100 patients. So, to help speed up the time to treatment, a team of researchers from the University of Mississippi developed wearable technology that can detect heart attacks accurately and up to two times faster than traditional methods.

The new tech comes in the form of a chip that analyzes electrocardiograms, aka records of electric signals in the heart, to pick up on a heart attack right away. When embedded in a wearable device, like a smartwatch, the chip displayed 92.4% accuracy, higher than many other current detection techniques. "For this issue, a few minutes or even a few extra seconds is going to give this person the care they need before it becomes worse," Kasem Khalil, who helped develop the chip, said in a news release.

And the innovation has potential for uses beyond heart attacks. "We want to be able to predict or identify many problems using technology like this," Khalil added. "Whether that's heart attacks or seizures or dementia. The detection of a disease or condition depends on the disease itself, but we're working to find faster, more efficient ways of doing that."

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Platypus Cousin Evolved from Living in Water to Living on Land

We may have gotten the evolutionary origins of the echidna backward, as new research suggests its ancestors probably lived in the water, not on land

Echidnas may have evolved from a water-dwelling ancestor in an unusual evolutionary event, scientists have discovered.
(Image credit: Kristian Bell/Getty Images)

Some of the strangest mammals on the planet just got even stranger. It turns out that echidnas — spine-covered, egg-laying mammals with beaks that shuffle through the undergrowth of Australian forests — probably evolved from a water-dwelling ancestor, a new study finds.

The discovery upends scientists' assumptions about the unusual mammals' origins and is a rare evolutionary event, researchers say.

"A fair few mammals have evolved from living on land to living in the water, but for an animal to go the other way is very rare," Sue Hand, a vertebrate paleontologist at the University of New South Wales in Australia, told Live Science.

https://bit.ly/3EzPhtD

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Are Saunas the New Social Club?

wolfyy.com

Saunas, where people gather to sweat together, have become one of the hottest wellness trends in the UK and US.

Market-research firm Grand View Research estimates the global sauna biz will be worth $1.3B by 2030, compared to $905m in 2024, per The Economist.

The number of social saunas in the UK has jumped from 45 in 2023 to 147 now, per Fast Company.

What goes on in these saunas?

At Othership, where a visit to its Manhattan location costs $45+, guests can simmer in a 90-person sauna during guided experiences that may include breathwork, aromatherapy, live music, or group "sharing" sessions, and enjoy what Condé Nast Traveler called "six of the coldest commercial ice baths in North America."

Other saunas are less bougie, and may be smaller and more intimate to foster conversation. Some even host events for people from specific groups or communities to socialize, per Vogue.

Why the buzz?

Third spaces, like the humble coffee shop, are disappearing, and younger people are consuming less alcohol.

Communal saunas reflect a growing desire for wellness and for socialization opportunities outside of loud clubs:

- Othership began as a backyard experiment by founders Robert and Emily Bent, a married couple who sought a way to foster community without booze.
- Daybreaker is an early-morning dance party hosted in multiple cities that does not serve alcohol.
- Board game meetups have become popular among Gen Zers and millennials.

TBH, it's kind of relaxing to think about meeting others in a sauna. No need to do your hair, makeup, or even choose an outfit. Plus, if you're nervous, well… everyone else is sweating, too.

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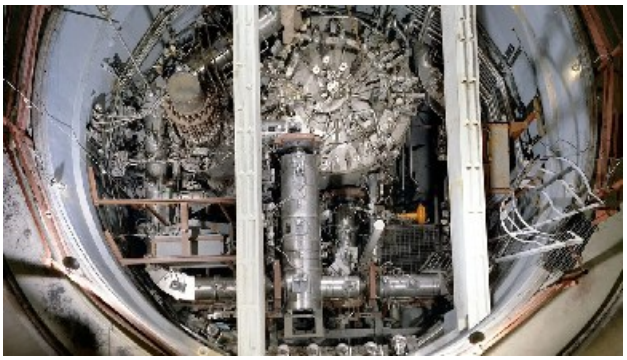
Chinese Nuclear Power Breakthrough Using Abandoned US Research

Scientists in China have refuelled a thorium reactor on the fly for the first time. The breakthrough is paving the way for working reactors that are significantly safer than conventional alternatives.



The Oak Ridge National Laboratory's molten salt reactor experiment is an early precursor to the Chinese reactor.
(Image credit: Oak Ridge National Laboratory/US Department of Energy)

For the first time ever, scientists in China have refueled an experimental nuclear reactor without shutting it down — a significant advance in weaning the world off fossil fuels and onto more efficient, low-carbon energy sources

The breakthrough, achieved using a prototype molten-salt design which runs on liquid thorium instead of uranium, means that China "now leads the global frontier" in nuclear

innovation, the project's lead scientist, Xu Hongjie, said during an April 8 meeting at the Chinese Academy of Sciences.

Thorium reactors were first developed in the 1950s in the U.S., before it went all-in on uranium, according to the International Atomic Energy Agency. Following this decision, this early research was later declassified, and the Chinese researchers made use of it for the current project.

https://bit.ly/3SbPLJl

Not too late to correct a mistake.

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Earth's Landmasses Lost Trillions of Tons of Water This Century

Scientists link the sharp decline with an increase in global drought and sea level rise

A man walks across the dry bed of Lake Ahmad Sar in India in 2015. The total amount of water

in Earth's lakes, rivers and soils has drastically dropped since the turn of the century, a new study finds. The primary culprit: rising global temperatures.
Sam Panthaky/AFP via Getty Images

Earth's landmasses are holding onto a lot less water than they used to — and this loss is not just due to melting ice sheets. Terrestrial water storage, which includes water in underground aquifers, lakes, rivers and the tiny pore spaces within soil, declined by trillions of metric tons in the early 21st century, researchers report in the March 28 Science.

This sharp decrease in freshwater stores is driven by rising temperatures on land and in the oceans, which in turn are linked to an increased global incidence of drought. And given the projected warming of the planet, this trend isn't likely to change any time soon, say geophysicist Ki-Weon Seo of Seoul National University and colleagues.

The team used several independent methods to assess terrestrial water loss from 2000 to 2020. These methods — each covering slightly different time spans in this period — included satellite gravity observations over land, satellite assessments of soil moisture, measurements of global sea level rise and observations of variations in Earth's rotation due to changes in mass distribution around the planet. As water has moved from land to sea, Earth's pole has drifted by about 45 centimeters.

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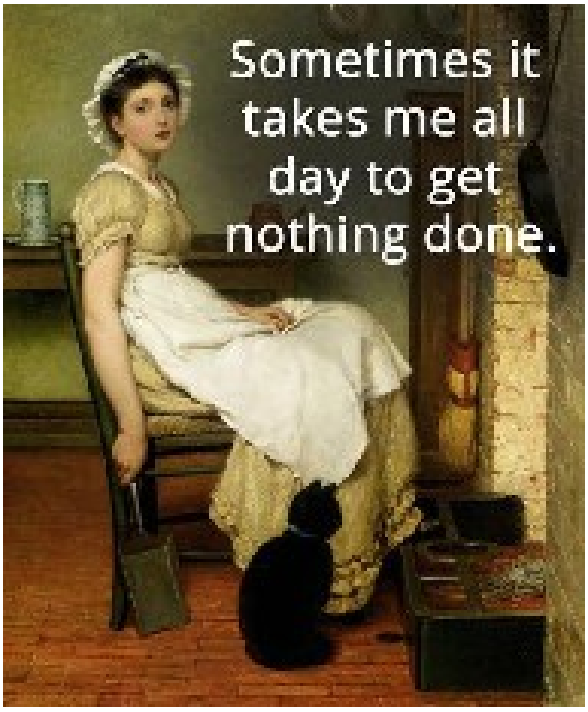

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Snake Versus Blue Heron. Care Guess Who Won?

Marcos Rodriguez moss&fog

Photographer Marcos Rodriguez witnessed and photographed a wild, 20-minute battle between a large heron and the snake that was going to be its meal.

In the dramatic images, we see the way the snake wrapped itself around its attacker. Captured in the Orlando Wetlands, this blue heron takes on a very defensive banded water snake, which refuses to give up easily.

https://bit.ly/4lSe0Kl

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FLASHMOB CENTRAL

Wayzata Symphony Orchestra and Edina Chorale

dailymotion.com

https://youtu.be/cIiTdsvCjYo

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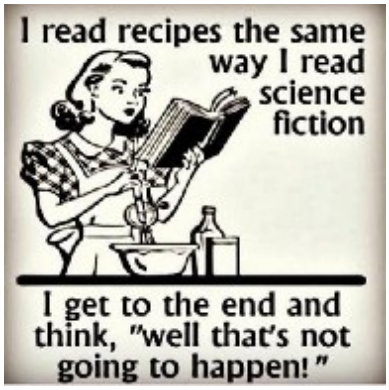

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Volcanic Eruption in Deep Ocean Ridge Is Witnessed for First Time

Researchers diving in a submersible in the eastern Pacific realized that the landscape they had studied the day before had been glassed over by fresh lava.

Darkened terrain, punctuated by a single cluster of dead marine worms, was a sign of cooled fresh lava after an undersea volcanic eruption in waters about 1,300 miles west of Costa Rica.
Credit...Andrew Wozniak/University of Delaware; HOV Alvin Team; NSF; Woods Hole Oceanographic Institution

Andrew Wozniak, a chemical oceanographer at the University of Delaware, struggled to process what his eyes were taking in. Dr. Wozniak was parked on the bottom of the Pacific Ocean beneath nearly 1.6 miles of water in Alvin, a research submersible. As far as he could see lay a mostly barren expanse of jet-black rock.

Just a day before, at this same spot, a vibrant ecosystem had thrived in the sweltering waters of the Tica hydrothermal vent, about 1,300 miles west of Costa Rica. Creatures inhabited every inch of the rocky seafloor, writhing in a patchwork of life. The crimson tips of giant tube worms waggled in the current, tangling around clusters of mussels.

Buglike crustaceans scuttled through the scene while ghostly white fish languidly prowled for their next kill.

Now, only a single cluster of tube worms remained in the blackened terrain, all dead. A haze of particulates filled the water as glints of bright orange lava flickered among the rocks.

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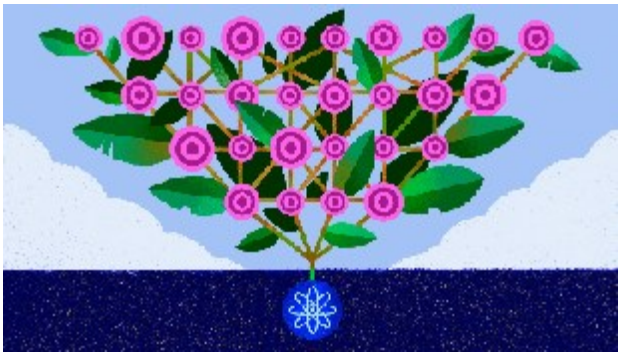
The Strange Physics That Gave Birth to AI

Modern thinking machines owe their existence to insights from the physics of complex materials.



Irene Pérez for Quanta Magazine

Spin glasses might be the most useful useless things ever discovered.

And with that teaser, I'm going to recommend this article to people who genuinely wish to delve into strange relationships.

https://bit.ly/4iM4N3C

Good luck to you who are fearless in their search for understanding weird relationships.

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At the Site of LA's Eaton Fire, Wildlife Is Making a Comeback

Chaney Trail Corridor Project

When the Eaton fire ripped through Altadena in January, humans weren't the only ones forced to flee — the area's animals, from bobcats to bears, deer, and hawks, also lost their homes. But now, just four months later, nature in the region is beginning to thrive once more, as heavy rains have turned the hills green and wildlife is starting to return.

UCLA researchers began installing trail cameras in the area less than two months after the fire, and in March, they documented the first mountain lion returning to the burn site. "The thing I really remember is coming here right after the fire — there was so much birdsong," professor Kristen Ochoa told the Associated Press.

The cameras have now spotted bobcats, owls, quail, coyotes, and more. The researchers have also noticed new growth on charred San Gabriel oak trees, whose deep roots have enabled them to survive for centuries, as well as the emergence of wild cucumbers, which serve as a food source for squirrels.

Ochoa, who posts the trail camera footage on the Chaney Trail Corridor Project Instagram account, said: "My first inclination was to share that to people who have lost so much during this fire and our community in Altadena, because it's a sign of hope that nature's returning, that nature's resilient." Watch some of the videos.

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La Niña Is Dead — What This Means for This Year's Weather

Scientists thought La Niña was coming. It didn't — at least for now. What could that mean for this year's hurricane season, and how might long-term climate change affect El Niño and La Niña patterns?

The ENSO can help forecasters predict how active the Atlantic hurricane season is.
(Image credit: Gizem Gecim via Getty Images

After one of the strongest El Niños on record ended in 2024, meteorologists predicted La Niña — the counterpart to this climate pattern — would follow. Signals of a slowly developing and "unusual" La Niña strengthened over the winter, but began to falter in recent months. By March it was dead.

So what happened — and how might that impact this summer's weather and the coming Atlantic hurricane season?

https://bit.ly/4d9kUXS

Maybe our friends at NOAA should read Shakespeare.

Not a whit. We defy augury. There's a special providence in the fall of a sparrow. If it be now, 'tis not to come. If it be not to come, it will be now. If it be not now, yet it will come—the readiness is all. Since no man of aught he leaves knows, what is 't to leave betimes? Let be. Hamlet Act 5, Scene 2

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53 Shakespearean Insults That Still Sting Today

Shakespeare may have a lot to say about love, but he also had no lack of words when it comes to a serious clapback.

Reader's Digest. Getty Images

Lest you have nothing to put fools in their place.

https://bit.ly/42NGcoW

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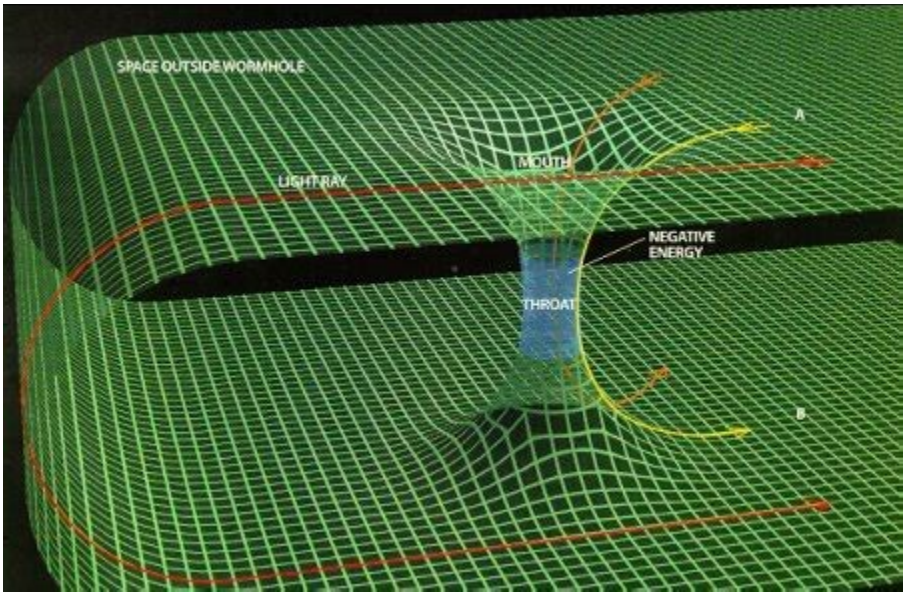
Neil deGrasse Tyson Explains Wormholes



natureuniverseblogspot

What is a wormhole? On this StarTalk explainer, Neil deGrasse Tyson and comic co-host Chuck Nice investigate the science of wormholes and how they work. You'll learn how gravity is the curvature of spacetime. We talk about the "speed limit" of the universe and how to break it using a wormhole.

https://youtu.be/1fFrpBJDMJo

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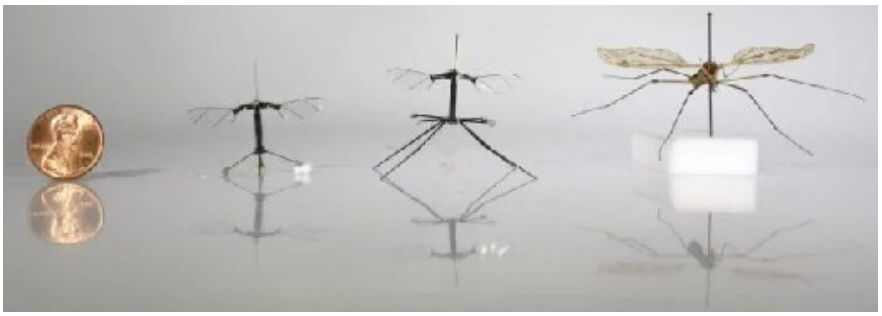
Tiny Robot -- Part Bee, Part Crane Fly—Finally Has Solid Legs

Harvard's RoboBee will one day conduct artificial pollination and survey disaster zones, but first it has to stop crash landing.



A penny, an older version of the RoboBee, the current RoboBee, and a crane fly.
© Harvard

Earlier versions of the RoboBee struggled to make a controlled landing because the air vortices generated from its flapping wings created instability close to the ground. It's a

problem appropriately called "ground effect" that helicopters also experience. Except it's potentially more challenging for the RoboBee as it weighs 0.004 ounces (1/10th of a gram), and its wingspan measures just 1.2 inches (3 centimeters).

"The successful landing of any flying vehicle relies on minimizing the velocity as it approaches the surface before impact and dissipating energy quickly after the impact," explained Nak-seung Patrick Hyun, a former Harvard postdoctoral fellow and now an assistant professor at Purdue University's School of Electrical and Computer Engineering. "Even with the tiny wing flaps of RoboBee, the ground effect is non-negligible when flying close to the surface, and things can get worse after the impact as it bounces and tumbles." Hyun led the RoboBee's landing tests on both solid surfaces and a leaf, just like a real insect.

https://bit.ly/4cHMNG1

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How Chemotherapy Works

healthbreaking.com

The standard treatments for most cancers include surgery, chemotherapy, radiation, or a combination of these. The specific treatment depends on the cancer type, stage, and individual preference. Chemotherapy ("chemo") refers to chemicals that interrupt cell division and shrink tumors, control advanced cancer, and prevent cancer recurrence.

Many normal, fast-growing cells divide frequently—such as those in the bone marrow and lining the digestive tract—and are affected by chemo, accounting for its severe side effects. Radiation broadly targets all cells in its path by damaging their DNA, though normal cells mostly recover. Cells that acquire massive amounts of damaged DNA are unable to function and subsequently die.

https://youtu.be/RgWQCGX3MOk?t=2

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This Common Pantry Staple Lasts Forever — Yes, Really

Some foods expire in days — honey lasts for centuries.

Photo: Food & Wine / Getty Images

The secret to honey's long-lasting life is thanks to its unique chemistry. As Compound Interest explains, its low moisture and high sugar content are the key ingredients, which is achieved thanks to the hard-working bees that not only go out to collect nectar but also the house bees who help dehydrate it.

"Nectar can be up to 70% water, and this water must be evaporated in order to produce the consistency of honey that we're all familiar with," Compound Interest explained.

"The bees achieve this by fanning the honeycomb with their wings in order to encourage rapid evaporation of water from the nectar mixture," Compound Interest added. This continuous flapping reduces the water content to 17%. Indeed, this is no easy feat. It can take the bees up to three days to make this magic happen.

https://bit.ly/41B6Ssk

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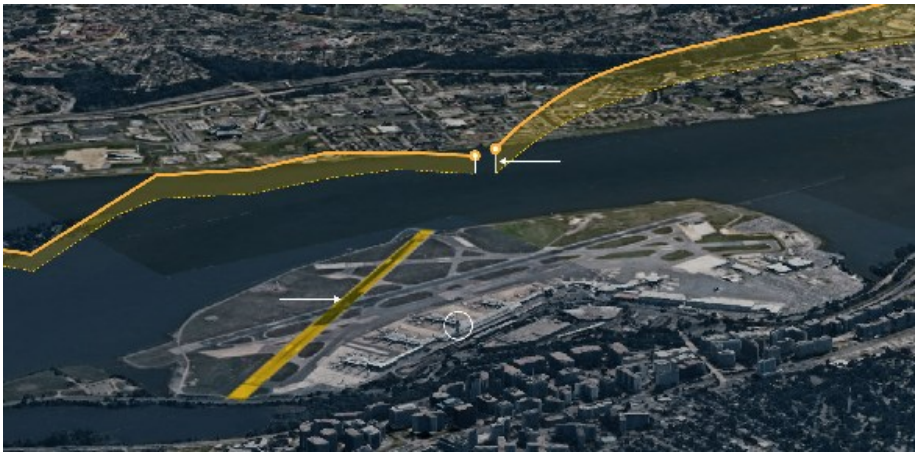
The Missteps That Led to a Fatal Plane Crash at Reagan National

New details revealed by The New York Times show that the failures on Jan. 29 before an Army helicopter crashed into a jet near Reagan National Airport were far more complex than previously known.



Sources: U.S. National Transportation Safety Board Report; Flight data by Flightradar24 (American Airlines jet) and ADS-B Exchange (Army helicopter);
aerial image by Google Earth Studio with data from SIO, NOAA, and U.S. Navy.By The New York Times

One error did not cause the worst domestic crash in the United States in nearly a quarter-century. Modern aviation is designed to have redundancies and safeguards that prevent a misstep, or even several missteps, from being catastrophic. On Jan. 29, that system collapsed.

"Multiple layers of safety precautions failed that night," said Katie Thomson, the Federal Aviation Administration's deputy administrator under President Joseph R. Biden Jr.

https://bit.ly/4jAKibo

This study is worth the attention of all aviators as it points out the fragility of a system that requires absolute attention to its many details.

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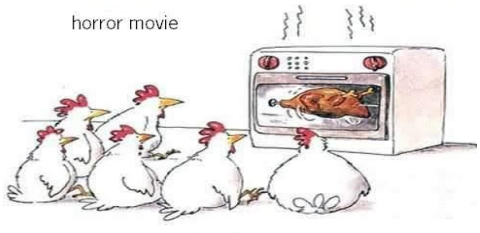

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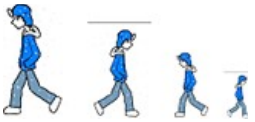
My Walking Thoughts



For Sunday May 11 2025

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Yesterday's forecast called for a high temperature in Ojai of 98 degrees… this in the wake of two weeks in the low to mid 60s. In fact the thermometer in my car hit triple digits by one p.m. so when today's forecast called for a cooler 97 degrees, I headed for Ventura Beach before the sun topped the hills to the east… 0630 to be fairly exact.

Two hours later and proud of my foresight, I arrived home to find an email from my longest lived friend, Louisa Wallace Jacobs, saying that one of her paintings was part of a judged competition at the Ojai Art Gallery in case I was interested… which of course I was.

Now as I've reported over the years, I have hoofed Ojai's roads, trails, barrancas, and "Keep Out" areas, waving to friends and strangers alike, noting the things that made them special… perhaps unique. But as I entered the Ojai Art Gallery in the early afternoon, I had the feeling I had made a wrong turn somewhere, and ended up in… well… how about Oz?

With the exception of Louisa and her son and daughter-in-law, I recognized no one… this despite at 88 I was smack-dab in the sweet spot of the attendees. After accepting the situation for what it was, I turned my attention to the artwork, finding it pretty much as I had expected. Of the perhaps 100 offerings, I judged 10 to be exceptional, the next 20 worth a second or third look. At the other end of the spectrum, I saw 20 as dubious, and the final 10 to be by what I considered benefactors or teachers pets.

Let me say here that my judgment in such matters is highly suspect and I might have gotten things absolutely backwards, so take it or leave it.

What really stands out for my foray into the world of local art was not what hung on the walls, but attendees… artists and observers whose shifting numbers might have totaled close to 500 over the two-plus hours.

As I indicated at the outset, I think 88 was pretty close to the average age. Most were women—certainly no more than 25% men—and very few below 40. What was most interesting in my survey was the amazing variety in terms of dress, hair color, ornamentation, and tattoos.

- For instance, muumuus are back in fashion.

- With the exception of grey or white, hair colors were… well let's just say I saw little that came by way of nature.
- Strings of beads along with jingling things are big in the circuit.
- Tattoos—more than I had expected—convinced me that age and ink just make for strange bedfellows.

Departing into another of those triple digit afternoons, I realized just how much of life I seem to have missed but despite that the 1960s appear to be alive and well in Ojai.

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