

## Ode to E Pluribus Unum for Sunday January 21 2024

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## NGC 1232: A Grand Design Spiral Galaxy



*Image Credit: FORS, 8.2-meter VLT Antu, ESO*

Galaxies are fascinating not only for what is visible, but for what is invisible. Grand spiral galaxy NGC 1232, captured in detail by one of the Very Large Telescopes, is a good example.

The visible is dominated by millions of bright stars and dark dust, caught up in a gravitational swirl of spiral arms revolving about the center. Open clusters containing bright blue stars can be seen sprinkled along these spiral arms, while dark lanes of dense interstellar dust can be seen sprinkled between them.

Less visible, but detectable, are billions of dim normal stars and vast tracts of interstellar gas, together wielding such high mass that they dominate the dynamics of the inner galaxy.

Leading theories indicate that even greater amounts of matter are invisible, in a form we don't yet know. This pervasive dark matter is postulated, in part, to explain the motions of the visible matter in the outer regions of galaxies.

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## Pacific Northwest Peacefulness



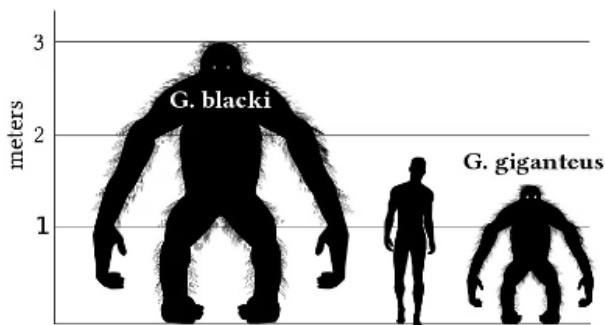
Lukas Furlan

Photographs taken in the mountains, along the coast, and the stunning Crater Lake, give you a glimpse of some of the wonders in store in the upper left of your map

<https://mossandfog.com/pacific-northwest-peacefulness/>

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## The Greatest Ape Now Has Its Place on Our Family Tree



1.8 meter tall human male compared to Gigantopithecus species  
This graph is based on orangutan proportions in a bipedal stance.

Gigantopithecus might have been 3m tall and 600kg

Protein sequences, like those of DNA, accumulate changes over evolutionary time. By looking at the sequence in the preserved protein from the dental enamel, and comparing it to protein from living apes, Cappellini and his team were able to reconstruct the extinct ape's evolutionary relationship to living great apes.

<https://bit.ly/3TVccVv>

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## **NASA's Artemis II Mission Delayed Until 2025**



*weathernetwork.com*

NASA has pushed back its timeline for the crewed Artemis missions that will send human beings to the Moon. The first one, Artemis II, was supposed to take place later this year, but now it will launch in September 2025 to orbit the Earth's satellite, with the landing mission, Artemis III, now planned for a year later in September 2026. NASA said the Artemis IV mission to take humans to the lunar Gateway space station in 2028 is still on track.

<https://bit.ly/3vAbK4S>

*Maybe it's time to take the program away from NASA.*

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## **Sleep with the Fishes, in the World's First Underwater Residence**



*The Conrad Maldives Rangali Island Resort has a hotel suite 16 feet below the Indian Ocean, entirely housed in a glass dome, to give you unparalleled views of the abundant fish and coral life that will surround you.*

*Moss & Fog*

<https://bit.ly/3HjVp6W>

*I don't know for certain, but I think Captain Nemo got there first.*

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## Seems T.Rex Junior May Have Outperformed Its Seniors



*David Aaron*

A rare juvenile *Tyrannosaurus rex* skeleton, one of only a handful of complete examples known. The skeleton is approximately 55% complete and, most importantly, has a skull that is over 90% complete. This is an extremely good state of condition for this kind of skeleton. Our understanding of the *T. rex* species, which roamed the earth during the Maastrichtian age of the Late Cretaceous period, around 68 to 66 million years ago, has been greatly expanded through study of juvenile skeletons.

In 1942, palaeontologists from the Cleveland Museum of Natural History excavated a small tyrannosaurid skull in southeastern Montana. As the skull was evidently from a carnivorous dinosaur but was significantly smaller than a fully-grown *T. rex* (the only

large carnivore from that region), the skull was denominated as 'Nanotyrannus', or 'very small tyrannosaur' in 1988.

Two further small tyrannosaur skeletons were discovered in Montana in the early 2000s, both approximately six feet tall and twelve feet long: 'Jane' (BMRP 2002.4.1) and 'Petey' (BMRP 2006.4.4). These discoveries sparked an ongoing debate as to whether Nanotyrannus truly was a distinct species; morphological skull features of the two new skulls had much in common with undisputed juvenile individuals of other tyrannosaurids. At present, the scientific community is mostly in agreement that the skeletons represent juvenile *T. rex*.

A groundbreaking study, published in 2020 and headed by Holly N. Woodward, analyzed the growth rings within femur and tibia bones sampled from the skeletons, to confirm that the specimen were still growing at their time of death. Rather than a separate species, these skeletons most likely represent a distinct ontogenetic stage of a juvenile, or sub-adult, *Tyrannosaurus rex*.

Woodward's study found that juvenile *T. rexes* grew in large, inconsistent growth spurts, growing quickly when food was plentiful, and stopping growth altogether when it was not. At the peak of their growth spurt (between the ages of 14 and 18), *T. rexes* grew as much as 2.1 kilograms per day. Their exceptionally rapid growth compared to other dinosaurs – a juvenile *T. rex* outgrew *Albertosaurus* and *Gorgosaurus* at around the age of 12 – gave them an advantage over other species, as they quickly grew out of their young and vulnerable stage. Over a span of about 5 years, their body mass more than doubled.

Hatchling and juvenile *T. rex* are now believed to have been clad in feathers, which they mostly lost as they reached maturity, retaining only a few on their heads, spines, and tails. These feathers provided warmth and camouflage to the younger *rexes*, to protect the hatchlings and aid the juveniles as they developed their hunting skills.

While adult *T. rex* walked to stalk their prey before crushing them in their heavy, bone-crunching jaws, juveniles were smaller, faster, and more agile. Juvenile *T. rexes* had big feet and proportionally larger legs and arms than their adult counterparts, with estimates suggesting they may have run as fast as 20-30 miles per hour. They also had a more open shoulder socket than adults, indicating they could potentially have had a wider range of arm movement to capture or manipulate prey. Their bladelike teeth are also significantly different to the large, blunt dental crowns of adults, and better adapted to precision bites and cutting through flesh.

A 2019 study found that juvenile *T. rex* teeth were still capable of puncturing bone, and could exert up to 5,641 newtons of force. Comparatively, a human has about 300 newtons of biting power and an adult *T. rex* can bite down with a force of around 35,000 newtons. It is now theorized that juvenile tyrannosaurids may have outcompeted

other medium-sized predators and driven them to extinction. Juvenile T. rex may, therefore, have dominated their ecological niche with the same ruthless efficacy as the fully-grown dinosaurs.

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## Ocean Vuong: Poet



Born in Saigon, poet and editor Ocean Vuong was raised in Hartford, Connecticut. In his poems, he often explores transformation, desire, and violent loss.

Vuong is the author of the poetry collections *Time Is a Mother* (2022) and *Night Sky With Exit Wounds* (2016), the winner of the 2017 T.S. Eliot Prize, and the chapbooks *No* (2013) and *Burnings* (2010), which was an *Over the Rainbow* selection by the American Library Association.

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## Aubade with Burning City

*South Vietnam, April 29, 1975: Armed Forces Radio played Irving Berlin's "White Christmas" as a code to begin Operation Frequent Wind, the ultimate evacuation of American civilians and Vietnamese refugees by helicopter during the fall of Saigon.*

Milkflower petals on the street  
like pieces of a girl's dress.

*May your days be merry and bright...*

He fills a teacup with champagne, brings it to her lips.

*Open*, he says.

She opens.

Outside, a soldier spits out  
his cigarette as footsteps  
fill the square like stones fallen from the sky. *May all  
your Christmases be white* as the traffic guard  
unstraps his holster.

His hand running the hem  
of her white dress.

His black eyes.

Her black hair.

A single candle.

Their shadows: two wicks.

A military truck speeds through the intersection, the sound of children  
shrieking inside. A bicycle hurled  
through a store window. When the dust rises, a black dog  
lies in the road, panting. Its hind legs  
crushed into the shine  
*of a white Christmas.*

On the nightstand, a sprig of magnolia expands like a secret heard  
for the first time.

*The treetops glisten and children listen*, the chief of police  
facedown in a pool of Coca-Cola.

A palm-sized photo of his father soaking  
beside his left ear.

The song moving through the city like a widow.

*A white... A white... I'm dreaming of* a curtain of snow

falling from her shoulders.

Snow crackling against the window. Snow shredded



with gunfire. Red sky.  
Snow on the tanks rolling over the city walls.  
A helicopter lifting the living just out of reach.

The city so white it is ready for ink.

The radio saying run run run.  
Milkflower petals on a black dog  
like pieces of a girl's dress.

*May your days be merry and bright.* She is saying  
something neither of them can hear. The hotel rocks  
beneath them. The bed a field of ice  
cracking.

*Don't worry,* he says, as the first bomb brightens  
their faces, *my brothers have won the war*  
*and tomorrow...*  
The lights go out.

*I'm dreaming. I'm dreaming...*  
*to hear sleigh bells in the snow...*

In the square below: a nun, on fire,  
runs silently toward her god —

*Open,* he says.

She opens.

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## **DetoNation**

There's a joke that ends with — *huh?*  
It's the bomb saying here is your father.

Now here is your father inside  
your lungs. Look how lighter

the earth is — afterward.  
To even write the word *father*

is to carve a portion of the day  
out of a bomb-bright page.

There's enough light to drown in  
but never enough to enter the bones

& stay. *Don't stay here*, he said, *my boy*  
*broken by the names of flowers. Don't cry*

*anymore.* So I ran into the night.  
The night: my shadow growing

toward my father.

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## Devotion

Instead, the year begins  
with my knees  
scraping hardwood,  
another man leaving  
into my throat. Fresh snow  
crackling on the window,  
each flake a letter  
from an alphabet  
I've shut out for good.  
Because the difference  
between prayer & mercy  
is how you move  
the tongue. I press mine  
to the navel's familiar  
whorl, molasses threads  
descending toward

devotion. & there's nothing  
more holy than holding  
a man's heartbeat between  
your teeth, sharpened  
with too much  
air. This mouth the last  
entry into January, silenced  
with fresh snow crackling  
on the window.  
& so what--if my feathers  
are burning. I  
never asked for flight.  
Only to feel  
this fully, this  
entire, the way snow  
touches bare skin--& is,  
suddenly, snow  
no longer.

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## **Google Owned Wing to Open 2nd Dallas Walmart Location**

The service is now available to roughly 60,000 households in suburban Dallas.



*eseller365*

It's been a few months since Walmart announced its new partnership with Google-owned drone delivery company Wing to begin operating out of one of its Supercenter locations in Frisco, Texas, and the company is set to add a second Dallas-area Supercenter location early next year.

In an effort to get the word out, Wing released a report in early December to remind consumers that the fledgling service can come in handy for the holidays, whether it's buying a last-minute gift for a holiday party or getting a missing ingredient needed to complete a recipe.

Wing Chief Financial Officer Shannon Nash told Supermarket News in an interview that 43% of consumers said in a recent survey that last-minute grocery runs are the most common reason they make an unplanned trip to the store, and 74% are interested in finding ways to replace time-consuming trips with fast delivery.

She said that Wing deliveries typically take under 30 minutes, and have reached their destination in as fast as three minutes.

Nash said she's found herself in situations where drone delivery would have bailed her out of a jam. "There's so many holiday parties going on, it's so busy, and just last weekend I got invited to this amazing brunch. It was a holiday party. You were supposed to bring a gift, and guess what I didn't do?" she said.

"On the way there, I panicked. I was like, 'Oh my gosh, I didn't pick up the gift.' So that took me an extra 30 minutes, and I was very late to the party. If I had drone delivery, I absolutely would have been able to get ready for the party and also get the gift delivered to my house."

She said Wing has already made more than 350,000 in the U.S. and other countries like Australia, Finland, and Ireland, giving the company a variety of weather conditions and landscapes to perfect the service. The orders are now capable of carrying just under three pounds of goods and travel at speeds of up to 65 miles per hour, she said.

Walmart is the only U.S. grocer Wing is affiliated with at this point, but the company will soon be in a second location in metro Dallas, and they're planning to scale from there, according to Nash. The company offers thousands of SKUs on its app, and the drones can travel as far as six miles from the store, which opens the service to 60,000 households in the area from that single location, Nash said.

She emphasized that drone delivery has a much lower carbon footprint than delivery vehicles, which resonates with consumers; about half of survey respondents cited in the study said they worry about their own personal impact on the environment.

Wing released the study to promote its potential for holiday shoppers, but in other markets, where Wing has been more active, there is a clear winner in terms of repeat customers, according to Nash, and that's for delivery of cups of coffee.

*Timothy Inklebarger for Supermarket News*

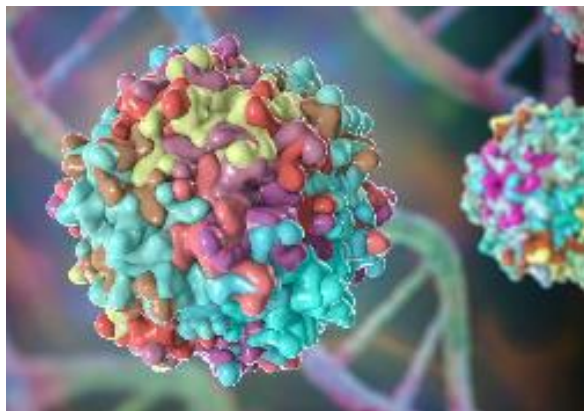
*I fear that like low-earth orbit space there's bound to be trouble before long.*

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## **Injection into a Monkey's Brain Stops Alcohol Use Disorder**

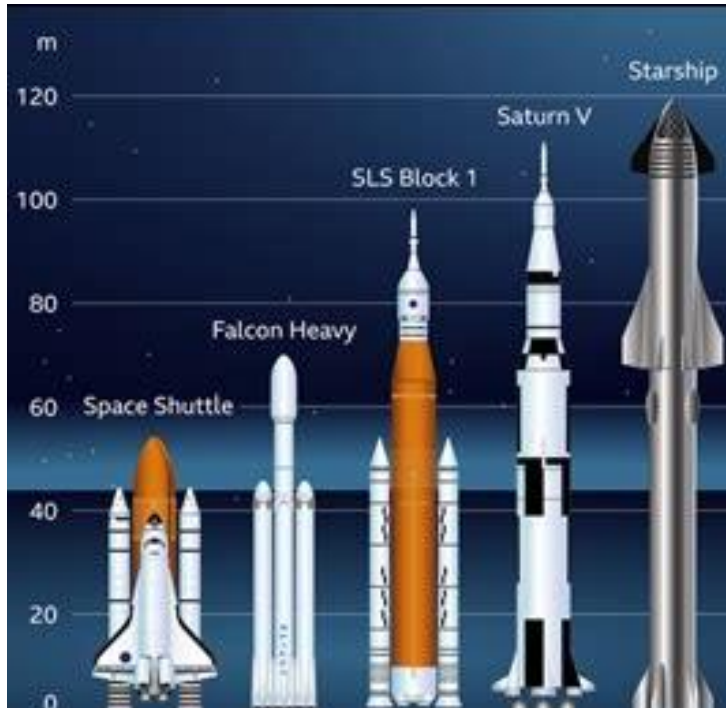


A small, proof-of-concept study in monkeys reveals the potential of a one-off gene therapy to treat people with alcohol use disorder who haven't responded to other treatments.

<https://bit.ly/44e7BPu>

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## Rocket Size Comparison 2024



*bbc.uk*

<https://youtu.be/SSNh5UGEETw?t=1>

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## Quantum Batteries Could Scramble the Rules of Cause and Effect

Batteries could charge up by relying on a quantum effect known as indefinite causal order, whereby the laws of cause and effect are scrambled, and power can move through the system quicker.



*An artist's illustration of a particle in a quantum superposition.  
(Image credit: agsandrew / Shutterstock.com)*

Quantum batteries of the future could gain charge by breaking the conventional laws of causality, research has shown.

Conventional batteries charge by converting electrical energy into chemical energy on the scale of vast numbers of electrons.

But in a new proof-of-principle experiment researchers have demonstrated how a weird quantum effect may lead to batteries that charge faster and with more efficiency by scrambling cause and effect, according to research Dec. 14 in the journal *Physical Review Letters*.

Causality, or the relationship between cause and effect, is not always straightforward in quantum mechanics, the strange rules that govern the world of the very small.

"Normally, if event A comes first and causes event B, it is assumed that B cannot in turn cause A at the same time," co-first author Yuanbo Chen, a physicist at the University of Tokyo, told Live Science. "However, recent advancements in theoretical physics propose that in certain frameworks, scenarios where 'A causes B' and 'B causes A' could simultaneously be true."

The principle of quantum superposition enables particles to exist in many different states at once, at least until they are observed and "pick" a state to land in.

Any property of a quantum object (such as its momentum, location, or, in the famed case of Erwin Schrödinger's hypothetical cat, whether it's alive or not) can exist in superposition — a probabilistic jumble of every possible state that only collapses into a definite outcome when the object is viewed.

This realization has led physicists to conduct all kinds of bizarre experiments that contradict our intuitive notions of what should be possible, including ones where a single particle can both exist and not exist in many different places at the same time.

But superposition doesn't just mess with our intuitive sense of space, it scrambles our sense of causality too. In 2009, physicists used a device called a quantum switch to observe a phenomenon called indefinite causal order. By sending a light particle, or photon down a pair of diverging paths, the physicists caused it to split into two possible versions of itself — one which went down the first path, and the other the second.

Then, depending on the path the photon took, physicists applied two different processes in a different order depending on the path. The result was a photon that had its causality jumbled: it was in a quantum superposition where both orders of events were true.

"Say that we have two processes: A and B," Chen said. "With a quantum switch, you can create a superposition of (First apply A and then B) and (First apply B and then A)."

Chen and his colleagues wondered if they could incorporate this into a quantum battery, a proposed device that could theoretically store the energy of photons and charge faster than conventional electrochemical batteries.

They compared three charging methods: connecting two chargers to a battery sequentially, simultaneously, or in a superposition that made it impossible to tell the order of input.

Their calculations showed that the superposition method would enable a low-power, causally-scrambled charger to deliver more energy more efficiently than a conventional high-power charger.

They followed up their calculations with a proof-of-principle experiment using light. By sending photons through a quantum switch with two possible paths, the researchers split the light particles into two possible versions of themselves, each one traversing a different path.

Then, after subjecting the light to two inputs that would polarize them in a different order (A then B or B then A) based on the path they were on, the researchers measured the polarization at the end and found that the individual photons had been causally scrambled.

Having tested their protocol, the scientists say their next challenge is to create a physical quantum battery that can hold a charge. However, the first experimental evidence for a quantum battery was only published last year, so it may not happen any time soon.



"Given the current situation characterized by limited experimental efforts and ongoing theoretical exploration in the realm of quantum batteries, it is challenging to estimate a precise timeline for achieving conclusive outcomes," Chen said.

*By Ben Turner for livescience.com.*

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## **Plug Me In: The Physics of Brain–Computer Interfaces**



*Brain tapping Developments in neurotechnology, biophysics and material science are helping to advance the technology that can link your brain to a computer.*

*(Courtesy: Shutterstock/Lia Koltyrina)*

The human brain is an astounding and complex piece of machinery. With more than 80 billion neurons in the human cerebral cortex, each with a thousand synapses, our brains process some 100 megabits of information per second. Imagine then, attempting to measure, extract and interpret all the signals in our brain in real time, at the speed of thought. Tapping into the brain might once have been solely in the realms of science fiction – from X-Men to The Matrix – but today, it's actually possible to link your brain to a computer and control a robotic arm, say, or translate your thoughts into text.

<https://bit.ly/3QuS6PI>

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## **A Primer on Roundabouts**

A transportation engineer explains the safety benefits of these circular intersections.



*Modern roundabouts can have one or two lanes, and usually have four exit options.  
AP Photo/Alex Slitz*

<https://bit.ly/47bACgW>

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## **Automakers to Their EV Growth Plans**



*Futurama/Fox*

Some of the biggest car companies in the world are hitting Ctrl-Z on their electric vehicle ambitions as consumer demand lags behind what the industry expected.

Ford announced yesterday that it's postponing \$12 billion in spending on EV manufacturing expansions, including a new battery plant—the second one the company has paused construction on in a little more than a month.

Why? EVs are piling up at dealerships because many people aren't willing to pay the higher average sticker price, especially now that interest rates have made car loans more expensive. EV sales were up 51% in the first nine months of this year vs. 69% over the same period in 2022, according to the Wall Street Journal.

### **Hazard lights are on**

Automakers reading the room—and battery-makers' warnings—are hitting snooze on their EV initiatives:

- Ford and General Motors abandoned their short-term goals for EV production quantity. Both are in the midst of conceding wage increases to striking auto workers.
- GM also postponed opening its second electric truck plant and mutually canceled a joint venture with Honda that aimed to get millions of under-\$30,000 EVs onto the global market.
- Elon Musk is considering delaying the construction of a Tesla "Gigafactory" in Mexico. Hertz, which sources most of its rentable EVs from Tesla, is also slowing the electrification of its fleet.

### **Fellas, is it woke to own an EV?**

Electric vehicles have also become, as Ford CEO Jim Farley recently put it, a "political football."

Among Americans, only two Republicans own EVs for every five EV-owning Dems, according to research company Strategic Vision. And President Biden's support for EVs has made them a target for his 2024 presidential opponents. Vivek Ramaswamy said EV buyers have "a psychological insecurity," while Donald Trump and Mike Pence have both amplified fears that a transition to electric would destroy jobs.

But...this could change as red states build more EV and battery plants. Ford is still planning to open a \$5.6 billion EV and battery manufacturing "campus" in Tennessee in 2025.—ML

*Morning Brew October 28, 2023*

*I'm not sure the EV ownership difference is a matter of politics as much as it is wealth.*

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## **Amazon Takes the Delivery Throne from UPS and FedEx**

For the first time, the biggest e-comm giant is also the biggest shipping giant in the U.S.



*Photo: Tom Williams/CQ-Roll Call, Inc (Getty Images)*

Amazon will deliver more packages in 2023 than anyone, according to a report Monday from the Wall Street Journal. The tech giant is on track to surpass UPS and FedEx in shipping volume this year, and it seems fitting that a tech giant will undoubtedly ship more gifts than anyone this Cyber Monday.

There's a quiet changing of the guard in the delivery sector. Amazon is on track to deliver 5.9 billion packages in 2023, according to internal projections seen by the Wall Street Journal. That would surpass the 5.3 billion packages delivered from UPS and 3.3 billion from FedEx in 2022, which neither company expects to break in 2023. What started as a logistics-obsessed electronic marketplace for books has grown into the largest shipping company in the world.

Amazon declined to comment on the WSJ report, but attributed improved delivery speeds to heavy investments in its last mile network. A UPS spokesperson told Gizmodo it's now focused on other parts of the market, including international and enterprise businesses, noting that "Amazon is an important customer and our relationship is mutually beneficial."

Amazon pulled slightly ahead of UPS in shipping this year, a byproduct of its absolute dominance in online retail. Thanksgiving through Cyber Monday is the biggest e-commerce weekend of the year. The company sold nearly 500 million items during the holiday weekend in 2022, breaking all previous records. The Seattle tech company dominates over 37% of the online retail market. The next largest retailers combined—Walmart, Apple, and eBay—control less than half of Amazon's market share. Amazon's fulfillment dominance is a long-planned vertical integration, part of a larger effort to control all steps of its business.

Last month, Amazon announced it would hire 250,000 U.S. employees this holiday season to meet the needs of its growing delivery service. Meanwhile, UPS recently cut its 2023 projections for package volume, citing weakened demand around its holiday season. UPS shares touched their lowest stock in three years last month, as the UPS drivers' ongoing fight for fair wages showed up in earnings. UPS's struggle with its workforce occurred in the shadows of Amazon's expanding fulfillment business.

Also on Monday, Amazon narrowly avoided a flare-up with labor rights groups. A 20,000-person strike from Spanish warehouse and delivery workers was settled just hours before Cyber Monday deals began flowing in. Reuters reports that Amazon reached an agreement with workers in Spain on the busiest online shopping day of the year, and caved to negotiate on improved pay and work conditions.

*By Maxwell Zeff for Gizmodo*

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## **Using AI, MIT Researchers Identify New Antibiotics Candidates**

These compounds can kill methicillin-resistant *Staphylococcus aureus* (MRSA), a bacterium that causes deadly infections.



*Using a type of artificial intelligence known as deep learning, MIT researchers have discovered a class of compounds that can kill a drug-resistant bacterium that causes more than 10,000 deaths in the United States every year.*

*Christine Daniloff, MIT, Janice Haney Carr, CDC, iStock*

In a study appearing in [Nature](#), the researchers showed that these compounds could kill methicillin-resistant *Staphylococcus aureus* (MRSA) grown in a lab dish and in two mouse models of MRSA infection. The compounds also show very low toxicity against human cells, making them particularly good drug candidates.'

<https://bit.ly/3RBkOOf>

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## **Why Coke at McDonald's Tastes Different**



[express.co.uk](http://express.co.uk)

[https://youtu.be/GA\\_OYUHYYMA?t=38](https://youtu.be/GA_OYUHYYMA?t=38)

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## Snowbirds Return to AirVenture



*Eric Van Gilder Aviation Photography*

The Royal Canadian Air Force Snowbirds will headline the airshow at EAA AirVenture in July. The nine-jet formation team last appeared at the big show in 2016 and quickly became fan favorites, said EAA spokesman Rick Larsen.

<https://youtu.be/j26NQwfuDYU>

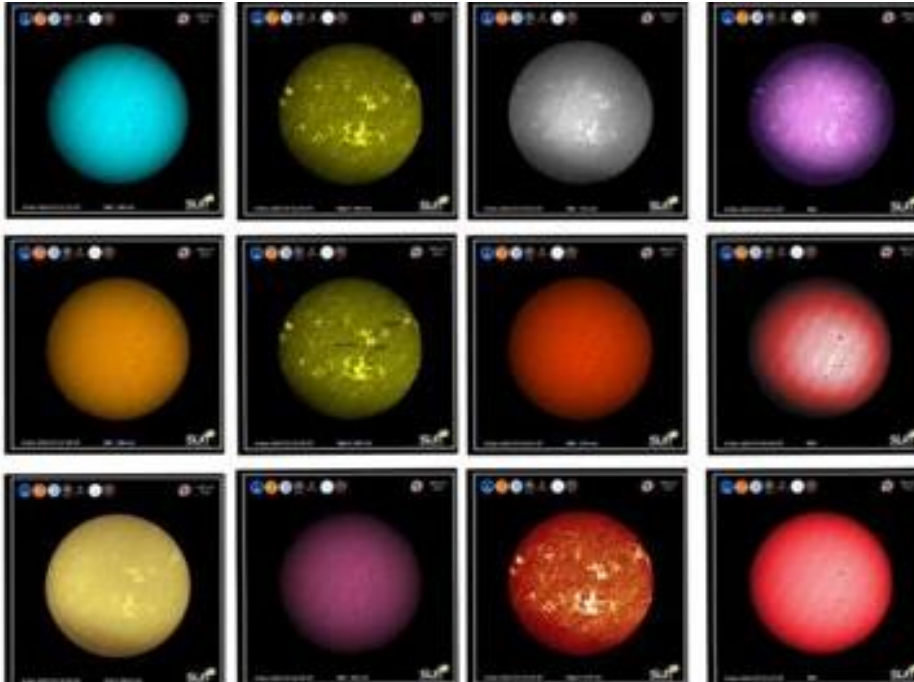
It's the RCAF's 100th anniversary in 2024 so it will be a memorable way to mark the centennial. "Along with their elegant precision aerobatics that define their aerial performances, we discovered in 2016 that the team members were enthusiastic and fully engaged in the aviation culture at Oshkosh, and truly enjoyed being with the tens of thousands of fellow aviators on the grounds."

The team, officially designated as 431 Air Demonstration Squadron, is based in Moose Jaw, Saskatchewan, and typically does 60 shows a year. They fly CT-114 Tutor aircraft that were formerly used for pilot training by the RCAF but are now flown only by the team. The announcement came after the International Council of Airshows (ICAS) meeting, which sets airshow performance schedules for the year. The Snowbirds will do a public practice on July 26 and full performances to close out AirVenture on July 26 and July 27.

*By Russ Niles -for AVWeb*

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## India's Aditya-L1 Solar Observatory's Gorgeous Views of the Sun



*Yahoo*

The pictures, captured by a payload named SUIT (short for Solar Ultraviolet Imaging Telescope), reveal a handful of features on the sun's surface, including a few sunspots, a solar "plage" and some silent, inactive areas.

<https://www.yahoo.com/news/indias-aditya-l1-solar-observatory-230001171.html>

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## **Photographers of the Year**

The top 100 winning images of Cupoty 5



*Fungi and Fairy Dust*  
*Sophia Spurgin*



These pictures were selected by our jury from almost 12,000 pictures sent in from 67 countries.

<https://bit.ly/3O1ChOM>

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## **Satellites Watch s Japan's New Volcanic Island Continues To Grow**

The island forged in fire off the coast of Japan in Oct this year is still growing, as seen in a Copernicus Sentinel-2 image caught on Nov. 27.



*An overhead view of a green island surrounded by blue water. a much smaller island can be seen just below the larger island of Iwo Jima.*

*(Image credit: ESA/USGS)*

The new volcanic island, which has been named Niijima — meaning "new island" in Japanese — was imaged by the European Space Agency's (ESA's) Copernicus Sentinel-2 satellite on Nov. 27. The continued growth of the island shows that the underwater volcanic activity that birthed the island off the southern coast of Iwo Jima is continuing.

<https://bit.ly/47pJqzd>

*Can you imagine if this had this occurred on March 1, 1945?*

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## A Glimpse of Gender Differences in Schizophrenia



*Schizophrenia in women is widely misunderstood—and misdiagnosed.*  
*[nationalgeographic.com](http://nationalgeographic.com)*

Evaluating gender-related differences is the first step in moving towards precision psychiatry. This article provides a brief overview of gender differences in the epidemiology, disease presentation, risk factors and management of schizophrenia.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9438004/>

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## Meanwhile, Back in the Amen Corner



*timefortheholidays.net*

Three-year-old, Reese: "Our Father, who does art in heaven. Harold is His name. Amen."

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A little boy was overheard praying: "Lord if you can't make me a better boy, don't worry about it. I'm having a real good time like I am."

\*\*

A Sunday school class was studying the Ten Commandments. They were ready to discuss the last one. The teacher asked if anyone could tell her what it was. Susie raised her hand, stood tall, and quoted, "Thou shall not take the covers off the neighbor's wife."

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After the christening of his baby brother in church, Jason sobbed all the way home in the back seat of the car. His father asked him three times what was wrong. Finally, the boy replied, "That preacher said he wanted us brought up in a Christian home, and I wanted to stay with you guys."

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I had been teaching my three-year-old daughter, Caitlin, the Lord's Prayer for several evenings at bedtime, when she would repeat after me the lines from the prayer. Finally, she decided to go solo. I listened with pride as she carefully enunciated each word right

up to the end of the prayer: "Lead us not into temptation," she prayed, "but deliver us some E-mail."

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One particular four-year-old prayed, "And forgive us our trash baskets as we forgive those who put trash in our baskets."

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A Sunday school teacher asked her children, as they were on the way to church service, "And why is it necessary to be quiet in church?" One bright little girl replied, "Because people are sleeping."

\*\*

Six-year-old Angie and her four-year-old brother Joel were sitting together in church. Joel giggled, sang, and talked out loud. Finally, his big sister had had enough. "You're not supposed to talk out loud in church." "Why? Who's going to stop me?" Joel asked. Angie pointed to the back of the church and said, "See those two men standing by the door? They're hushers."

\*\*

A mother was preparing pancakes for her sons, Kevin (five) and Ryan (three). The boys began to argue over who would get the first pancake. Their mother saw the opportunity for a moral lesson. "If Jesus were sitting here, He would say, 'Let my brother have the first pancake, I can wait.'" Kevin turned to his younger brother and said, "Ryan, you be Jesus!"

\*\*

A wife invited some people to dinner. At the table, she turned to their six-year-old daughter and said, "Would you like to say the blessing?" "I wouldn't know what to say," the girl replied. "Just say what you hear Mommy say," the wife answered. The daughter bowed her head and said, "Lord, why on earth did I invite all these people to dinner?"

\*\*

A Sunday school teacher asked her class, "What was the name of the mother of Jesus?" One child answered, "Mary." The teacher then asked, "Who knows the name of the father of Jesus?" A little boy said, "Verge." Confused, the teacher asked, "Where did you get that?" The boy said, "Well, you know they are always talking about Verge n' Mary."

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## New Eruption Threatens Grindavík



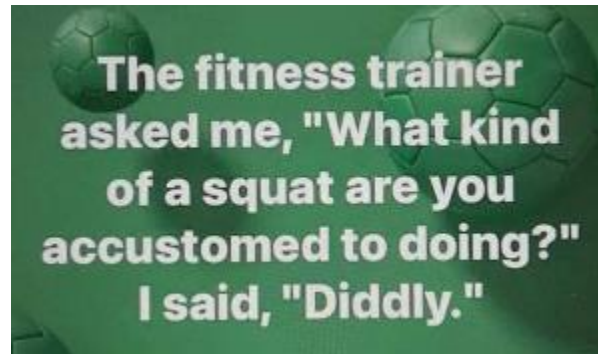
*Aerial footage shows lava spilling out of the erupted volcano.  
(Image credit: Iceland Public Defence / Handout/Anadolu/Getty Images)*

A volcano on Iceland's Reykjanes Peninsula erupted on Sunday, cracking open fissures that are extending toward Grindavík and threatening to drown the town in lava flows.

Seismicity and ground deformation data indicate a magma dike running down the Reykjanes Peninsula has reached beneath Grindavík. Magma flowing into the dike may have "reactivated" existing faults and fractures in Earth's crust, and likely opened brand new fissures, the statement said.

<https://bit.ly/3RYIj3V>

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## **Felix Mendelssohn Violin Concerto in E minor, Op. 64 (1844)**



*Atlanta Symphony Orchestra*

The E Minor was Mendelssohn's last concerto and remains among the most highly regarded works in the violin repertoire...its mastery an essential piece for all aspiring violinists .

Distinctive aspects include the almost immediate entrance of the violin at the beginning of the work and the through-composed form of the concerto as a whole, in which the three movements are melodically and harmonically connected and played with each movement immediately following the previous one without any pauses.

You can find renditions on YouTube by any noted violinist but I chose the Perlman because I find him a particularly worthy human being.

Itzhak Perlman with the San Francisco Symphony <https://youtu.be/PC6cPairOTA>

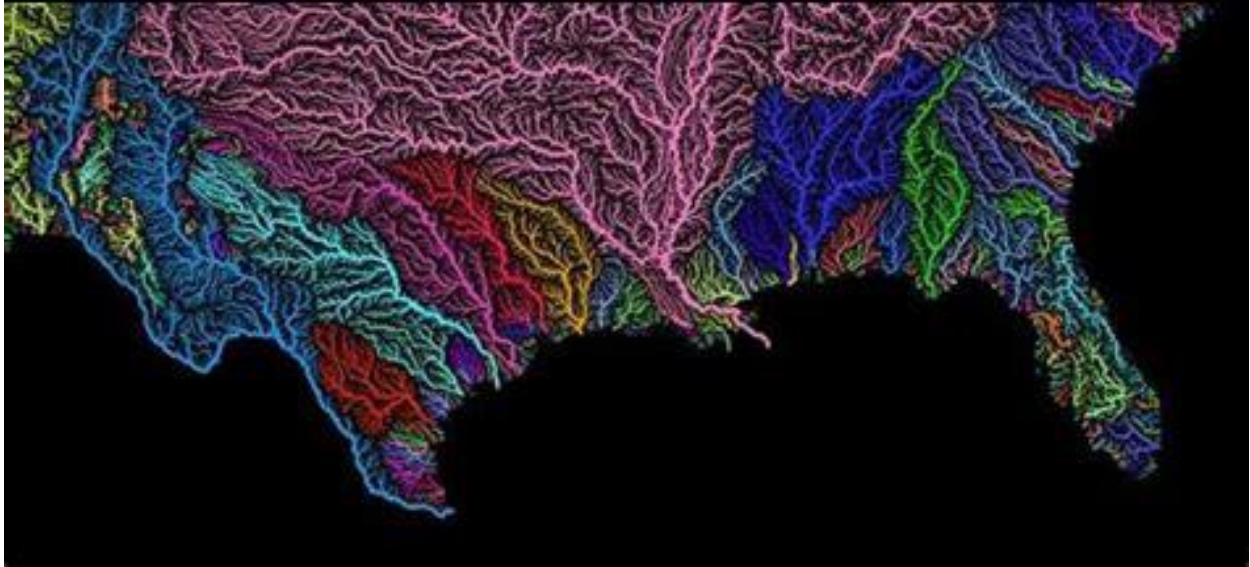
Gustavo Dudamel at Hollywood Bowl <https://youtu.be/TBWql1evpPE>

*I think Mendelssohn the most underrated music composer in history.*

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## Maps Capture Where the World's Rivers Go

Cartographer Robert Szucs uses satellite data to make stunning art that shows which oceans waterways empty into.

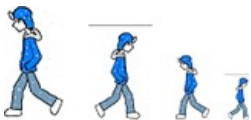


*pinterest*

<https://bit.ly/48r85ot>

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## My Walking Thoughts



**For Sunday January 21 2024**

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## Trip to Terra Incognita: Quantico, September 1959 (#7)

### On Being a Marine

Graduation included a band, pass-in-review, a couple speeches, an oath to defend the nation against all enemies foreign and domestic, and presentation of commissions. These time-honored traditions were followed by our obligatory initiation to the officer's

ranks via the 'purchase' of one's First Salute (in my case by Sergeant Bulldog) who in recognition of my elevated position replaced 'TROW-TIE' with "Second Lieutenant Trotti."

By law as well as custom I was now a Marine, so how did I feel about that?

For starters I was conscious of the fact that for the foreseeable future I would not have to endure incessant shouts and insults nor have to crawl on my belly through mud. I had completed the program with minor damage to body and (I thought then) mind. I was slightly less fit than in the beginning owing to the loss of five pounds, this despite the 100 calories per day intake of eggs, potatoes, SOS, ham, okra, and mystery substances designed to bring me to the peak of physical perfection.

I knew without stumble my eleven general orders, my rifle number, enlisted serial number, and a detailed account of nearly every battle in which the Corps had taken part since its founding in Philadelphia's Tun Tavern.

I could sing all three versus to the Marine Corps Hymn, hit a distant target often and accurately enough to qualify as a sharpshooter, hit the deck and snap off 50 sit-ups on command, or if it came to it grab my footlocker and race out onto the grinder in the dead of night to 'watch' a non-existent movie.

On the debit side of my performance I never got my rifle so clean as to pass inspection, managed to stay awake during training lectures on how to dig a 1-2-3 trench, or spit-shined my dress shoes to sparkle like the sun. "Oh well," I sighed in recognition of my many shortcomings, I would just have to work on those in the future...maybe.

But somewhere in my psyche lay the feeling that I failed at something important...something having to do with not giving the utmost of myself to the task of becoming a Marine. It wasn't until years later I realized what lay at the base of this confliction...the fact that I had placed *not being noticed* above giving my very best to every effort.

In and of themselves not doing another 10 pushups or 20 sit-ups might seem of little consequence, but as I later came to realize, for a Marine such behavior is unacceptable. I wonder how many of my platoonmates experienced the same letdown.

Anyway, after handshaking with peers (thank God the abomination of high fiving had yet to come into vogue) and watching the reviewing officers walk away shaking their heads in dismay, I focused my attention on the 15 days leave ahead prior to reporting in to the Marine Detachment at Pensacola Naval Air Station. Thus, with uniforms stuffed into an ugly military equivalent of a carpet bag, I bid farewell to Quantico and headed West to retrieve my car.

## **Fiscal Notes**



Here's a good place to explain my financial situation since joining the Corps. Every two weeks at Quantico we all lined up in front of the disbursing officer who formally presented us with \$50.00 in cash for our fortnight labors. Advised to do so, I had brought with me the return airline ticket and \$200 to cover contingencies, chief among which was my weekly laundry bill that ranged anywhere between \$35 and \$75 depending on the weather and the industry of our sergeant instructors. At the end of the program, I had just enough left to buy a cup of coffee before boarding the plane. Oh yeah, there was also a bill from the uniform tailor for \$1560.00, payable with interest at \$123.00 per month. In return for the this I now possessed:

- 1 winter service uniform w/2 trousers and service cap
- 1 summer service uniform w/2 trousers and service cap
- 3 wool shirts
- 3 short sleeve khaki shirts
- 1 barracks hat with 3 covers
- 1 pair cordovan shoes
- 1 ceremonial Mamaluke Sword...*that cut 1 wedding cake*
- 1 dress blue uniform w/accoutrements...*worn 5 times*
- 1 white evening dress uniform...*worn once*
- 2 pair white gloves

Last but not least: 1 rosewood swagger stick

Now we come to the reckoning:

My monthly base salary as a second lieutenant was \$222.30 so it took a full 12 months before my uniform bill was satisfied. Then there were charges for laundry and dry cleaning, assessments for various command 'suggested' charities and other nickel-dime things that at the end of the month left me enough for one drink at the obligatory weekly Friday evening Happy Hour.

### **Final Note:**



General Randolph McCall Pate's tour as Commandant came to an end that December. He was replaced by General David M. Shoup whose first decree was to banish the carriage of swagger sticks.

Watching the immolation of that rather expensive limey affectation at a forthcoming happy hour gave me so much pleasure I placed General Shoup solidly in my pantheon of Marine Corps heroes.

Next week: *Trip to Terra Incognito, Pensacola.*

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## **What Should You Know About Suicide?**



An unprecedented decline in youth mental health was called "the crisis of our time" by U.S. Surgeon General Vivek Murthy in 2021 -- well before the pandemic's effects could be factored into that prognosis. The trend had been building for a while: Between 2007 and 2018, the suicide rate among 10- to 24-year-olds rose by 57%, according to the National Institutes of Health.

<https://bit.ly/45sI31W>

*If you or someone you know is dealing with self-harm or suicidal ideation, trained counselors are available 24/7 via phone, text or chat at 9-8-8, the Suicide and Crisis Lifeline.*

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