

Ode to E Pluribus Unum for Sunday July 13 2025



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W5: Pillars of Star Formation



Image Credit: NASA, WISE, IRSA; Processing & Copyright : Francesco Antonucci

How do stars form? Images of the star forming region W5 like those in the infrared by NASA's Wide Field Infrared Survey Explorer (WISE, later NEOWISE) satellite provide clear clues with indications that massive stars near the center of empty cavities are older than stars near the edges.

A likely reason for this is that the older stars in the center are actually triggering the formation of the younger edge stars. The triggered star formation occurs when hot outflowing gas compresses cooler gas into knots dense enough to gravitationally contract into stars.

In the featured scientifically colored infrared image, spectacular pillars left slowly evaporating from the hot outflowing gas provide further visual clues.

W5 is also known as Westerhout 5 (W5) and IC 1848. Together with IC 1805, the nebulas form a complex region of star formation popularly dubbed the Heart and Soul Nebulas. The featured image highlights a part of W5 spanning about 2,000 light years that is rich in star forming pillars. W5 lies about 6,500 light years away toward the constellation of Cassiopeia.

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The Complex Engineering Behind Firework-Firing Drones.



wsj.com

Pyro drones are transforming firework displays by launching pyrotechnics in intricate patterns with millisecond accuracy. WSJ'S George Downs explores the technology that is allowing these quadcopter fleets to create novel aerial displays.

<https://bit.ly/46pn2sT>

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Poetry Corner

When an old man died in the geriatric ward of a nursing home in North Platte , Nebraska, it was believed that he had nothing left of any value.

Later, when the nurses were going through his meager possessions, They found this poem. Its quality and content so impressed the staff that copies were made and distributed to every nurse in the hospital .

One nurse took her copy to Missouri. The old man's sole bequest to posterity has since appeared in the Christmas edition of the News Magazine of the St. Louis Association for Mental Health. A slide presentation has also been made based on his simple, but eloquent, poem.

And this little old man, with nothing left to give to the world, is now the author of this 'anonymous' poem winging across the Internet.

Crabby Old Man

What do you see nurses? . . . What do you see?
What are you thinking when you're looking at me?
A crabby old man, not very wise,
Uncertain of habit with faraway eyes?

Who dribbles his food and makes no reply.
When you say in a loud voice . 'I do wish you'd try!'
Who seems not to notice the things that you do.
And forever is losing A sock or a shoe?

Who, resisting or not lets you do as you will,
With bathing and feeding. The long day to fill?
Is that what you're thinking?. . . . Is that what you see?
Then open your eyes, nurse you're not looking at me.

I'll tell you who I am As I sit here so still,
As I do at your bidding, as I eat at your will.
I'm a small child of Ten with a father and mother,
Brothers and sisters who love one another.

A young boy of Sixteen with wings on his feet
Dreaming that soon now a lover he'll meet.
A groom soon at Twenty my heart gives a leap.
Remembering, the vows that I promised to keep.

At Twenty-Five, now I have young of my own.

Who need me to guide And a secure happy home.
A man of Thirty My young now grown fast,
Bound to each other With ties that should last.

At Forty, my young sons have grown and are gone,
But my woman's beside me . . . to see I don't mourn.
At Fifty, once more, babies play 'round my knee,
Again, we know children My loved one and me.

Dark days are upon me my wife is now dead.
I look at the future shudder with dread..
For my young are all rearing . . . young of their own.
And I think of the years and the love that I've known.

I'm now an old man and nature is cruel.
Tis jest to make old age look like a fool.
The body, it crumbles grace and vigor, depart.
There is now a stone where I once had a heart.

But inside this old carcass a young guy still dwells,
And now and again my battered heart swells.
I remember the joys I remember the pain.
And I'm loving and living life over again.

I think of the years, all too few . . gone too fast.
And accept the stark fact that nothing can last.
So open your eyes, people open and see.
Not a crabby old man. Look closer . . see ME!!

This was sent to me by an old friend. I thought I'd share it with the Ode

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FLASHMOB CENTRAL

L'Orchestre National d'Île-De-France a La Gare Saint-Lazare



youtube

<https://youtu.be/RyiLIx2sEI?t=6>

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Does the Human Brain Have a Finite Memory Capacity?

"It's not some hidden dimension of space that's limitless."



Just how much can you pack into a brain – and will yours ever run out of storage space?

Image credit: Antonov Serg / bygermina / gdainti / Shutterstock.com; modified by IFLScience

It's tempting to think of the brain like a computer. Information goes in, *stuff* happens, and actions come out. Say, for example, you're happily hiking along a trail when a bear appears. Your eyes see the bear; that visual information triggers something inside your brain that says, "Oh No, Bad Thing!"; and the result of all this is you backing away calmly and taking a different route (probably).

For most of us, we don't bother too much about how our brains actually achieve all this, just as we don't spend that much time thinking about the complex inner workings of our home computers. We just know that we should do things like keeping dust out of the USB ports and emptying the recycle bin from time to time, just as we know that eating healthily and doing activities like puzzles are good for our brains.

Another thing brains and computers have in common is memory storage. In fact, there are some theories about how our brains store memories that look more like a computer than modern computers do. You can purchase a laptop based on the size of its hard drive – but can we really treat our brains the same way? Does the human brain have a set, finite storage capacity, or is this where the metaphor starts to break down?

The question of just how much memory the human brain can hold is one that has always intrigued.

<https://bit.ly/4mVMegG>

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The Dirty Side of a Hurricane

Why the right side of a tropical cyclone is the most dangerous.



geology.com

The “dirty side” of a hurricane refers to the part of the storm that usually brings the highest impacts: the greatest winds, greatest tornado risk, and greatest storm surge and flooding. In the case of Atlantic hurricanes, which rotate counterclockwise, the “dirty side” is on the right — where the winds are moving in the same direction as the storm, combining their speeds. This is why the greatest risk of storm surge during a hurricane is at the center of the storm, in the “eyewall,” and to the right of it, where the forward-moving winds push water onto shore.

Because the center of the storm is the strongest, forecasters tend to focus on tracking it, using a popular tool called the “forecast cone,” which shows the potential path of the center of a storm, but leaves out the wider impact areas. So many

<https://youtu.be/G8SK6e8I01Y?t=1>

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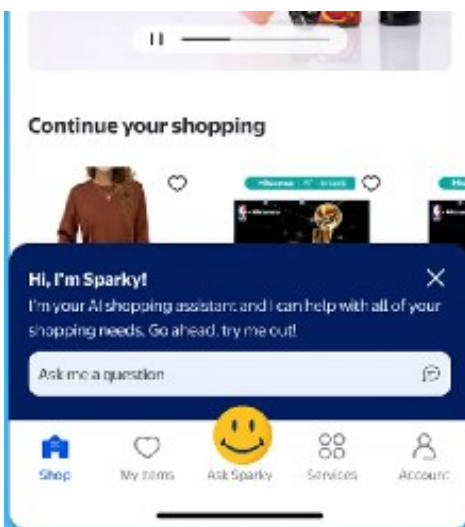


"But all the blueberries...the wholegrains...
the skimmed milk...the decaffeinated coffee...
the broccoli...you mean it's all been for nothing?"

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Walmart Debuts Sparky, Its Generative AI Assistant for Customers

Joining Wally, an AI assistant for merchants, Sparky will summarize reviews for customers and help shoppers plan purchases.



Walmart's consumer-facing assistant builds on larger plans to integrate AI into both the company's operations and customer experience.

Courtesy of Walmart

Walmart introduced a customer-facing generative AI assistant named Sparky on Friday to summarize and answer questions about reviews, offer recommendations and help shoppers plan purchases.

Walmart is training its generative AI shopping assistant with retail-specific large language models to task agents with item comparisons, deep personalization, shopping journey completion and more. Sparky stitches together the results from those tasks to solve complex queries.

Sparky, which is available in the Walmart app, will soon expand to include reordering and service booking while understanding text, image, audio and video inputs.

<https://bit.ly/43QtoP7>

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How Do Clouds Get Their Shapes?

From fluffy cumulus to feathery cirrus to imposing cumulonimbus.



There are 10 main cloud types, including the fluffy-looking cumulus clouds seen here

Image: Akaradech Mark II / Getty Image

To understand how clouds get their shape, it helps to understand the basics of how they form. When air rises and cools, the water vapor it holds condenses into tiny water droplets or ice crystals. If enough of these particles cluster together, a visible cloud forms.

Scientists typically classify clouds into ten main types, based on their shape and how high they appear in the sky. For instance, cumulus clouds (from the Latin for “heap”) resemble a pile of cotton balls, while stratus clouds (meaning “layer”) stretch out like blankets and cirrus clouds (Latin for “hair”) look feather-like. These root names can be combined to describe more complex cloud types—like cirrocumulus. The prefix “alto” (meaning “high”) helps distinguish mid-level clouds from their lower-level counterparts (such as altostratus vs stratus).

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

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New Device Profiles Newborns’ Immune Function

The Biophysical Immune Profiling for Infants (BLIPI) profiles an infant’s immune system in under 15 minutes, using just a single drop of blood.



Infant Immunity: New Research Identifies Weak Spot and "Secret Weapon"
scitechdaily.com

Researchers from the Singapore-MIT Alliance for Research and Technology (SMART), MIT's research enterprise in Singapore, along with colleagues from KK Women's and Children's Hospital (KKH), have developed a first-of-its-kind device to profile the immune function of newborns.

Using a single drop of blood, the Biophysical Immune Profiling for Infants (BLIPI) system provides real-time insights into newborns' immune responses, enabling the early detection of severe inflammatory conditions and allowing for timely interventions. This critical innovation addresses the urgent and unmet need for rapid and minimally invasive diagnostic tools to protect vulnerable newborns, especially those born prematurely.

<https://bit.ly/4kLNTnw>

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Last Night, My Neighbor
Came Home Drunk &
Banged On His Own
Door For Like 5 Mins. 🧑
Problem Is, He Lives
Alone, So I Went
Outside And Told Him
He Wasn't There & He
Left!!! 😂😂😂

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Big Picture Competition Winners

A Cavalcade of stunning photos



Grand Prize Winner, Lemur's Tough Life
Donglin Zhou

A Common brown lemur (*Eulemur fulvus*) carries her baby on her back while making a harrowing leap from one towering cliffside to another. This remarkable image was captured after a day of persistence on the photographer's part—hiking an hour through rugged limestone terrain to her position. Only after waiting until the early evening did her patience pay off when this plucky primate emerged onto the scene, likely leading the troop in search of food.

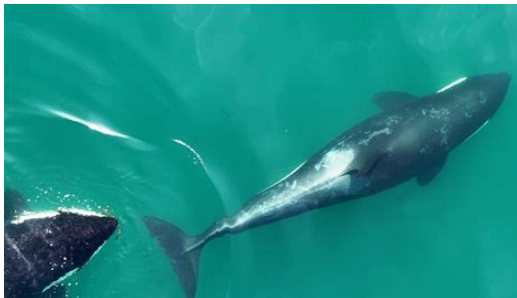
Ordinarily Brown lemurs have no set dominance hierarchy, with groups composed of males and females, old and young alike, but it appeared clear to this photographer that the focal lemur was the leader of the pack. This daring lemur navigated her group deftly through the sharp peaks and crevices of the stone forest, resulting in the immortalization of this once-in-a-lifetime leap.

<https://bit.ly/4lgCCLQ>

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Killer Whales Groom Each Other—With Pieces of Kelp

In a newly discovered form of social tool use, orcas scratch each other's backs with seaweed



science.org

Using their teeth, the giant ocean predators break off short lengths of bull kelp, a seaweed that looks like a multitailed whip, and place it between their stomach and the belly of another whale. The result is a magnificent image: two killer whales, moving in synchrony, their bodies making a curved “S” shape as they hug a small piece of kelp between them.

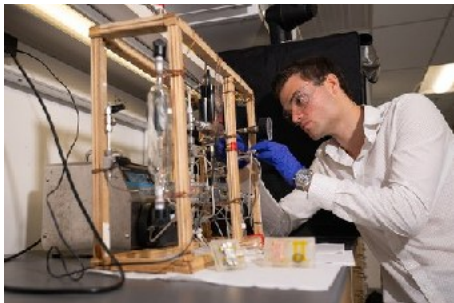
This act of mutual exfoliation, which researchers call “allokelping” in a study published today in *Current Biology*, marks [the first time aquatic mammals have ever been observed making tools to cooperatively groom each other](#). The finding expands the already rich social repertoire of these endangered animals, which form fast friendships, and even care for their grandchildren after going through menopause.

<https://bit.ly/4nhxft>

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Plastic from Carbon Dioxide, Water, and Electricity

What if a machine could suck up carbon dioxide from the atmosphere, run it through a series of chemical reactions, and essentially spit out industrially useful plastic?



Graduate student in chemical engineering Maxim Zhelyabovskiy working with the system described in the new paper.

Caltech

Reporting in the journal [Angewandte Chemie International Edition](#), Agapie and a team of Caltech chemists have developed a system that uses electricity from sustainable sources to carry out the chemical conversion of carbon dioxide (CO₂) into molecules, such as ethylene and carbon monoxide, that are useful for making more complex compounds.

When this is accomplished using light as the energy source, without plants, such a process is known as artificial photosynthesis.

The new system feeds the ethylene and carbon monoxide that has been generated into a second catalytic loop that yields industrially useful plastics called polyketones, which are known for their strength, durability, and thermal stability, making them ideal for

applications ranging from adhesives to car parts and from sports equipment to industrial piping.

<https://bit.ly/4njGyNy>

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A New Ocean Is Forming in East Africa

But don't expect the continent to tear open for a few million years.



Active lava flows spilling out of the Erta Ale volcano in Afar, Ethiopia.

Credit: Derek Keir / University of Southampton / University of Florence

Rhythmic pulsing deep beneath landlocked east Africa is literally [tearing the continent apart](#). But while the effects won't arrive on the planet's surface for a while, the end result is an entirely new ocean basin above it. An international research team reached their conclusion after analyzing more than 130 samples from young [volcanoes](#) located across a rare geological region below Ethiopia. The evidence is laid out in a study published on June 25 in the journal [Nature Geoscience](#).

The Afar Rift zone is one of the few examples on Earth where [three tectonic rifts converge](#). Experts previously theorized this juncture of the Main Ethiopian, Red Sea, and Gulf of Aden Rifts contained an active, hot upwelling of molten mantle. If true, this area—often known as a plume—would display clear effects on the tectonic plates above it. Rift zones typically stretch and pull tectonic plates until they eventually rupture. But how the plume beneath Afar's is structured, how it behaves, and how

<https://bit.ly/4ejmI0G>

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When Did Nature Burst into Vivid Color?

Scientists reconstructed 500 million years of evolutionary history to reveal which came first: colorful signals or the color vision needed to see them.



A mantis shrimp displays striking coloration and can see it better than most animals: Its eyes have 12 color channels that can perceive the ultraviolet spectrum and polarized light.
Underwaterpics/iStock

You might start with the question, what was the initial function of conspicuous coloration... like red and color vision?

<https://bit.ly/3TLiYM1>

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June's best science images

The month's sharpest science shots — selected by Nature's photo team.



By analyzing the eye's structure and using computer models to simulate what the whale might see underwater, researchers established that despite having big eyes, whales are incredibly shortsighted.

flickr.com

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

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Photos of What Life Was Really Like in Wild West Mining Towns

From Deadwood, South Dakota to Arizona's "wickedest town in the West," these 19th-century mining settlements were once home to gambling halls, brothels, and some of the frontier's most lawless characters.



City Hall in Deadwood, South Dakota. Circa 1890.
Public Domain

In the second half of the 19th century, hundreds of thousands of people poured west in search of one thing: gold. The California Gold Rush promised quick and easy riches, and prospectors of all types spread across the American frontier. As they gathered in California, Montana, and elsewhere in search of precious metals, Wild West mining towns followed.

Some of these towns are well-known. Deadwood, South Dakota, and Tombstone, Arizona, are famous in Wild West lore. But they were just two of the thousands of mining towns that popped up across the American frontier. Most followed a similar cycle of boom and bust — but at least one Wild West mining town is still a thriving city today.

<https://bit.ly/3G319oM>

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Michael Adams' Hypersonic Spin

On the 15th of November 1967; Michael J Adams' took the seventh X-15 flight, in the number three aircraft. Three minutes later, Adams reached a peak altitude of 266,000 ft.



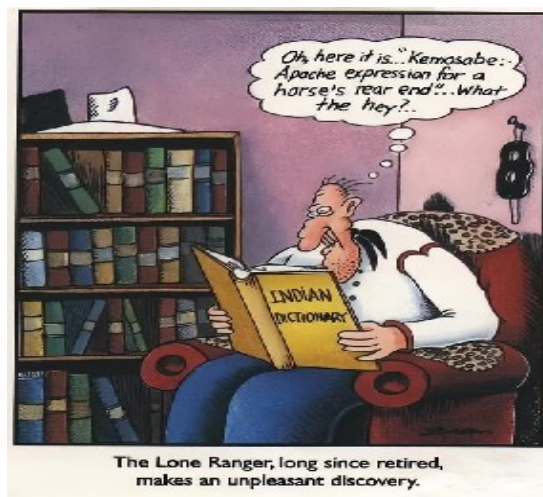
NASA

As the X-15 traversed into a descent, the drift reappeared; within 30 seconds, Adams' descending flight path was at right angles to the attitude of the aircraft. At 230,000 ft, while descending into the rapidly increasing density of the atmosphere, the X-15 entered a spin at 5 times the speed of sound. Mach 5.0

Inverted Mach 4.7 dive at an angle of 45 degrees, the X-15 went into a limit cycle with rapid pitching motion of increasing severity, still in a dive at 160,000 feet per minute.

<https://bit.ly/3TOXr55>

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NASA's SPHEREx Mission Will Share Its All-Sky Map with the World

The observatory will collect data on hundreds of millions of cosmic objects, enabling studies on everything from the early universe to the origins of life.



This image of the Vela Molecular Ridge was captured by SPHEREx and is part of the mission's first public data release. The yellow patch on the right side of the image is the emission nebula RCW 36, a cloud of interstellar gas and dust that glows in some infrared colors due to radiation from nearby stars.

Credit: NASA/JPL-Caltech

NASA's newest astrophysics space telescope launched in March on a mission to create an all-sky map of the universe. Now settled into low-Earth orbit, [SPHEREx](#) (Spectro-Photometer for the History of the Universe, Epoch of Reionization, and Ices Explorer) has begun delivering its sky survey data to a [public archive](#) on a weekly basis, allowing anyone to use the data to probe the secrets of the cosmos.

"Because we're looking at everything in the whole sky, almost every area of astronomy can be addressed by SPHEREx data," said Rachel Akeson, the lead for the SPHEREx Science Data Center at IPAC. IPAC is a science and data center for astrophysics and planetary science at Caltech in Pasadena, California.

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Texas Brothers Buy Abandoned Boeing 727 for \$10,000

'One man's trash is another man's treasure.'



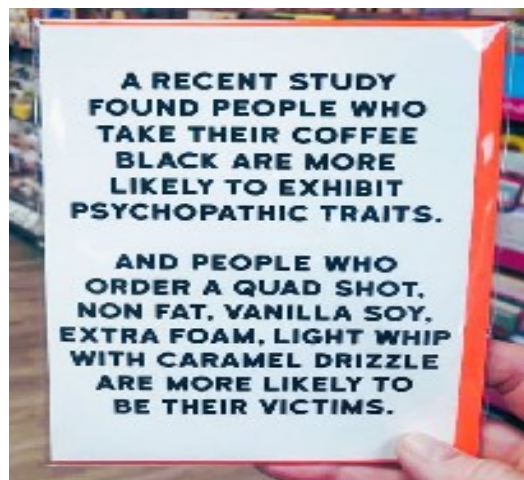
The Boeing 727 sat in an El Paso, Texas airport hangar for nearly two decades.

Images: Courtesy of Ismael Lara

The Lara brothers have big plans for Hangar Hangout. They envision refreshing the interior and transforming the cockpit and other key areas into a kind of “virtual field trip,” where kids can learn about aviation. Lara says he plans to install LED panels inside to make the experience feel more immersive. Outside, they’re considering setting up a food truck station. They also hope to invite local artists to paint parts of the plane, offering visitors a slice of Texas culture.

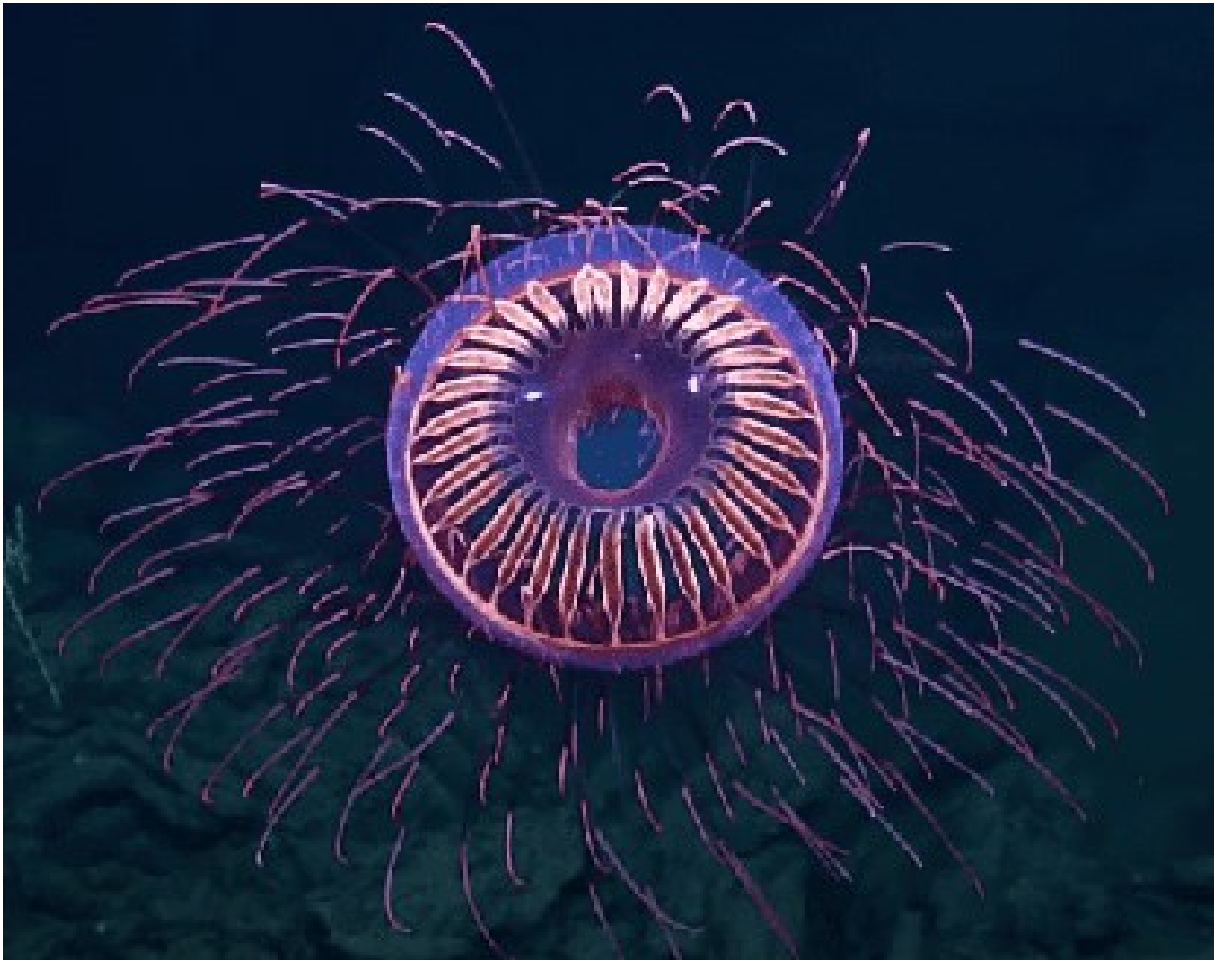
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Halitrephes Jelly: A Burst of Deep Sea Fireworks



EVNautilus/ YouTube

The frilled tentacles of the *Halitrephes maasi* jelly came into view at 1225m in the Revillagigedo Archipelago off Baja California, Mexico. Radial canals that move nutrients through the jelly's bell form a starburst pattern that reflects the lights of ROV Hercules with bright splashes of yellow and pink--but without our lights this gelatinous beauty drifts unseen in the dark.

<https://youtu.be/9D0eyl7-XQA>

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Mavericks 100-Foot Wave, an Oceanic Unicorn

Better still, here's a guy who rode it



Kron4.com

A wave this size is thought to be a once in ten year phenomenon... some say 20. But regardless of the frequency, the lure of the 100 foot monster is at the top of every big wave surfer's wish list.

<https://youtu.be/RdGr48kv4X8>

Cay FitzGerald follows mark Sponsler's weekly Stormsurf sent this. Yikes.

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Chords & Riffs

Christoph Willibald Gluck (1714–1787)



pqpbach.ars.blog.br

The German classical composer, Gluck was best known for his operas, including Orfeo ed Euridice (1762), Alceste (1767), Paride ed Elena (1770), Iphigénie en Aulide (1774), the French version of Orfeo (1774), and Iphigénie en Tauride (1779)

In his early works, of which mostly only fragments have survived, Gluck largely followed the existing Italian operatic fashion—melodic but never grand, charming without intensity. Occasional intensely passionate outbursts and the beginning of characterization, however, foreshadowed the great dramatic composer he was to become.

Gluck's great French "reform operas" are more strongly governed by the principle of contrast than are the Italian works; the declamatory style of the vocal line is more marked than in the Viennese operas, and the power and orchestral color are more intense.

During Gluck's lifetime, and in the perceptions of the next generation, he was seen to play a central role in the forging of a new operatic style. Although he had no great successors, his historical position is assured through his efforts to overturn the outmoded conventions of opera seria without destroying the genre itself and through the model his reform movement would provide later operatic reformers.

Dance of the Blessed Spirits <https://youtu.be/tfDjLjrLND8?list=RDtfDjLjrLND8>

Alceste <https://youtu.be/iDFnGqG7qt8?list=RDIDFnGqG7qt8&t=78>

Iphigénie en Aulide Overture <https://youtu.be/T6UliZK-hd8>

Harmony Zhu "Melodie" from Orfeo ed Euridice <https://youtu.be/oi46vURLyB4>

Armide – Ouverture <https://youtu.be/-5Weql7f-d8?list=RD-5Weql7f-d8>

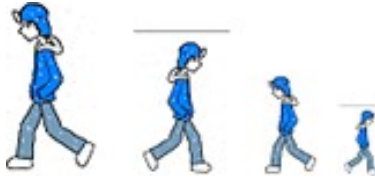
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Get a baby gate they said, it'll
keep them safe it said.... 🙄😓



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My Walking Thoughts



For Sunday July 13 2025

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Some Unfinished Business with Flight Training at Kingsville.

I left my story about flight training at the point where I took the F9F-8 Cougar out to the carrier, completed the required landings, and returned to the base pretty pleased with myself.

Had this been a year earlier or a year later all that would have been left was for some admiral or another to make a few comments, pin some shiny gold wings a half-dozen or so newly minted Naval Aviators, and for us then to beat feet to our first fleet duty station.

But this was 1960 and some people in high places decided it might be a good idea to add one more challenge... that of making certain we dweebs were able to transition into a single seat tactical aircraft with no instructor there to take control if we found ourselves not quite up to the task.

Accordingly, I along with two other students—NAVCAD Dixon and MARCAD Rummell-- moved our flight gear from VT-21's hangar to the one with a sign proclaiming "VT-23: Home of the Tigers."



Well, I might have thought pretty highly of myself, but not yet "a Tiger." Instead it turned out that the "Tiger" involved was the Grumman F-11 Tiger, the current showpiece of the Navy's Blue Angel Flight Demonstration Team.

Wasp-waist and needle thin with small and deeply cranked mid-mounted wings, it was in its own way as beautiful as the Air Force's Lockheed F-104 Starfighter. While clearly designed to ring the mach-2+ bell as could its Blue Suiter cousin, it lacked the power to do so. Instead of General Electric's J-79, the Tiger had to settle for Curtis-Wright's far less powerful J-65 that even with an afterburner left it seriously underpowered.

Well to be fair, the shortfall was by comparison with the Starfighter since the F-11 was still capable of supersonic level flight, but at the same time it left the Tiger in a sort of no-man's land... neither brutal like the Cougar, nor dashing as the Air Force's lineup of Century Series aircraft.

So while awaiting the arrival of the Chance-Vought F-8 Crusader and the McDonnell F-4 Phantom, the Navy consigned the Tiger to backwater roles... the Blue Angles and VT-23 at Kingsville and VT-26 at the similar base at Beeville, TX.

Just a look at the the cluster of F-11s on the flightline was enough to make my heart enter into a joyful Piti-Pat routine, and right down to the soles of my flight boots I knew that once I learned how to start one I was 'good to go.' But first there was a week of ground school, getting to know the ins and outs of the sleek beauties.

How for instance movement of the throttle and control pole made their way to their assigned tasks. How fuel from several obscure locations in the tightly wrapped bird could be pumped back and forth to feed the thirsty J-65, yet maintain the sleek aircraft's critical weight and balance within narrow limits.

Bookishly prepared, I was whisked of to a 40-foot trailer containing a fully instrumented F-11 cockpit to practice the full range of normal and emergency flight procedures. After three days of incessant systems failures most of which led to crashes or ejection, I began to wonder if indeed my career choice was a good one. Thus it was with a certain amount of trepidation that I suited up for my Fam-1 flight where I would be alone in one bird and 'chased' but an instructor in another.

Typical of Familiarization flights throughout Naval Aviation, not a lot was left to chance. After taking the runway, the routine called for engine runup, a check of all the instruments, and then inspection of the wingman's aircraft... then let her rip.

I don't remember being overwhelmed by the acceleration during the initial aircraft roll, but from 70 knots where I scootched the throttle outboard to clear the afterburner detent and then full forward to bring an additional 4,000 pounds of thrust into play, things began to happen in a hurry.

Almost immediately the airspeed needle leaped through 100 knots...then 120 when it was time to raise the nose 10 degrees and break ground. The next several activities seemed to loom up in a concerted rush... gear up (clunk-clunk...thunk); 170 knots then raise the flaps; establish a positive rate of climb and at 250 feet disconnect the 'zero-delay ejection lanyard/ (I'll explain anon); then allow the aircraft to settle into an initial climb speed of 300 knots.

"Have I forgotten something," I asked myself, fearing there was something else to be done, but the concern passed into the slipstream as we (the bird and I) plunged into the upper atmosphere with the nose pointed 30 degrees above the horizon. It was a saintly feeling until the long forgotten instructor's voice broke into my reverie. "Give me one," it said, meaning back off the power a little to allow him to maintain formation.

It was then it hit me what I had forgotten. After hitting climb speed I was to have come out of afterburner at what was to have been somewhere in the neighborhood of 2 thousand feet, not the 17 thousand I was by then passing.

I waited for a blast over the radio, but none was forthcoming. Instead, we climbed to 40 thousand feet, then turned to the West the first planned maneuver... pitching down 10 degrees, going back into afterburner, and watching as the mach meter needle wavered for a second or two before taking the plunge, settling at 1.2. To tell the truth I didn't feel the soft flutter as we cleared the transonic range, but you'd never have known it by my tales at the bar that evening.

To be continued.

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