

Ode to E Pluribus Unum for Sunday September 26 2021

Simeis 147: Supernova Remnant

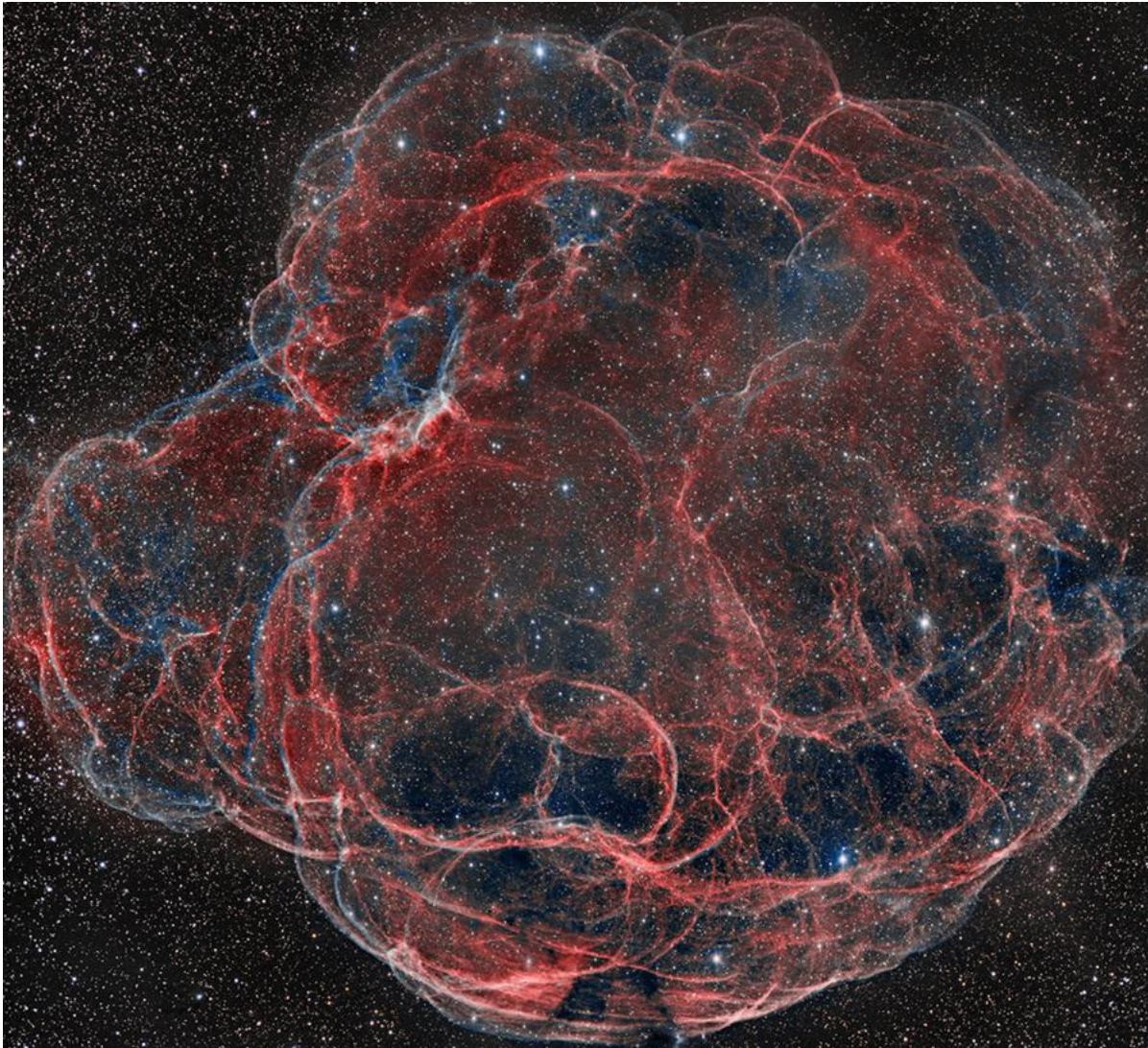


Image Credit & Copyright: Georges Attard

It's easy to get lost following the intricate looping filaments in this detailed image of supernova remnant Simeis 147. Also cataloged as Sharpless 2-240 it goes by the popular nickname, the Spaghetti Nebula.

Seen toward the boundary of the constellations Taurus and Auriga, it covers nearly 3 degrees or 6 full moons on the sky. That's about 150 light-years at the stellar debris cloud's estimated distance of 3,000 light-years.

This composite includes image data taken through narrow-band filters where reddish emission from ionized hydrogen atoms and doubly ionized oxygen atoms in faint blue-green hues trace the shocked, glowing gas.

The supernova remnant has an estimated age of about 40,000 years, meaning light from the massive stellar explosion first reached Earth 40,000 years ago. But the expanding remnant is not the only aftermath. The cosmic catastrophe also left behind a spinning neutron star or pulsar, all that remains of the original star's core.

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Travis Mill's Incredible Story about Owning Your Attitude



<https://www.youtube.com/watch?v=eSytAgtLqVw&t=347s>

You've seen this in Odes before, but you can bet your sweet bippy you'll see it again and again so long as there is an Ode.

(Sweet Bippy? Well if you don't know the term and where it came from, I won't bother to explain...but if you care, I bet you can Google it, or as I do, search for it on <https://DuckDuckGo.Com> , so you won't have to keep dodging Google's advertisers.)

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The Bench



<https://www.youtube.com/watch?v=8AEFMXQnRtU>

A USC Cinematography student Cameron Burnett film. There is more than meets the eye, in this random encounter on a park bench.

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Kermit the Frog Shares His Musical Talent with a Friend



<https://www.youtube.com/watch?v=5gNuj8UkyC4>

In case you didn't know, Dr. Frog received his Ph. D in music from Julliard and has played with philharmonic orchestras all over the world. Here we find him teaching a struggling minstrel how to pick something other than his nits. *(Ah...you thought I was going t say something else.)*

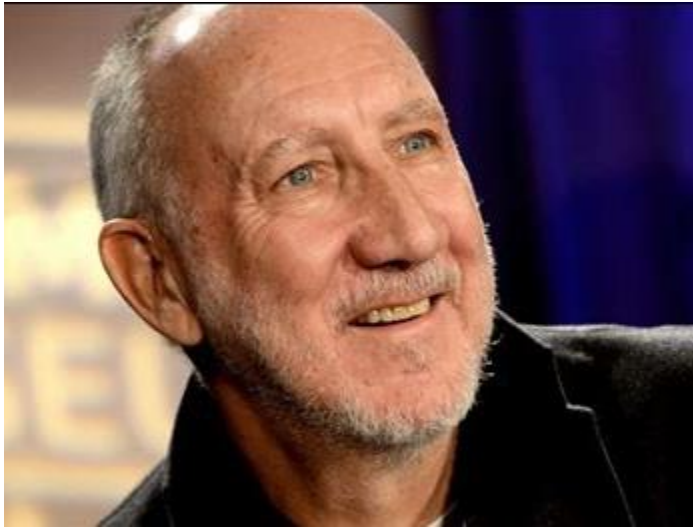
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Almost 5,000 people queued for hours in the rain at a swabbing event in Worcester, to get tested to see if they were a match to help save the life of a five-year-old boy fighting a rare cancer after parents asked for help.

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Pete Townshend...a Man for Many Seasons



The English guitarist, singer and songwriter is co-founder, leader, guitarist, secondary lead vocalist and principal songwriter of the *Who*, one of the most influential rock bands of the 1960s and 1970s.

As an instrumentalist, although known primarily as a guitarist, Townshend also plays keyboards, banjo, accordion, harmonica, ukulele, mandolin, violin, synthesizer, bass guitar, and drums. He is self-taught on all of these instruments. He plays on his own solo albums, several Who albums, and as a guest contributor to an array of other artists' recordings.

Let My Love Open the Door <https://youtu.be/4FZbcoWrUsw>

Empty Glass <https://www.youtube.com/watch?v=oR9vESiIDms>

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1959 Lister Chevrolet-Costin Prototype... *For Sale*



- Lister Costin #1, Prototype
- Chevrolet 327 CI (5.4 L) V8
- 4-speed manual transmission
- Raced at Goodwood in its 1959 debut
- Completely restored and race prepared
- Invited to the Goodwood Revival
- Eligible for historic racing worldwide

In all of vintage racing, there is no more desirable or collectible category of cars, than the front-engined sports racers that ran in International and SCCA competition from the mid 1950's into the early 1960's. As a group, they embody the beautiful shapes, wonderful sounds, and exhilarating performance that defines historic racing.

During that era, probably the most respected and successful independent manufacturer was Lister of Cambridge, England. In the early 50's, out of a personal love for racing, Brian Lister steered his third generation engineering and fabrication company into building racing cars. Beginning with MG and Bristol powered sports cars, the young team immediately made a mark on the European racing circuits. After a fire at Jaguar's Browns Lane Plant destroyed the competition department in February 1957, Lister was there to pick up the pieces. Now with a supply of Jaguar D-Type engines, Lister's cars started to dominate racing in Europe. In the U.S., Lister's cars were fitted with Chevrolet V8's by the likes of Briggs Cunningham, Jim Hall, and Carroll Shelby. By 1958 Lister was a force to be reckoned with on both sides of the pond.

The Lister Knobbly, as the 1958 car was commonly known, was regularly seen beating the best Europe and the U.S. had to offer, including the factory Jaguar entries sharing the same engine. To maintain Lister's competitive advantage for the 1959 season, Brian Lister hired noted aeronautical engineer and aerodynamicist Frank Costin to redesign the Knobbly. His credentials included years of work for de Havilland Aircraft company, as well as designing the sleek bodywork for the Lotus Mark VIII, Lotus Eleven, and the

Vanwall VW5 - the winner of the very first F1 Constructor's championship. Drawing on all of this expertise, Costin penned the design for the Lister Costin, which was in many ways a true D-Type successor. In total, thirteen Lister Costins were built; one Chevrolet V8 powered prototype, and twelve production versions; three with Jaguar power, eight with Chevrolet V8 engines, and one with a Maserati V8.

BHL 121 holds the distinction of being the prototype, and very first Lister Costin. Fitted for a Chevrolet V8, the car was cloaked in Costin's new, lithe body design. The car was delivered to its first owner, gentleman racer John Ewer, in early 1959. Ewer would go on to successfully race BHL 121 at Snetterton, Goodwood, and Silverstone over the next year.

Ewer sold the car in August 1960 to Jimmy de Villiers of Southern Rhodesia. Villiers would export BHL 121 to Africa to participate in the 1st Rhodesian Grand Prix. The car ran next with Rhodesian driver John Love at the wheel, and is believed to have won a South African Championship for him.

In 1986 the car was found and purchased by Cedric Selzer, a former Team Lotus F1 mechanic turned restorer, and returned it to UK. Shortly after, veteran club driver David Beckett purchased the disused, but original racecar, and engaged in a complete restoration that was completed in 1987. Beckett would go on to race the car at historic events throughout the late 80's and early 90's, with Beckett winning the HSCC and AMOC Championships in 1988 and 1991.

Beckett would go on to sell BHL 121 in the early 90's to David Clarke of Taylor and Crawley, who subsequently traded the car to a new owner who hired accomplished sports car drivers Tony Dron, and Soames Langton to pilot the it at historic events.

The car would eventually be sold at the Brooks Auction at the 1995 Goodwood Festival of Speed for \$184,000. The high-bidder was Vintage Racing Motors from the USA, and they exported BHL 121 to the U.S., where it would join their fine historic race car collection in Seattle.

In 1999 the Lister Costin found a new owner, Pat Hart. Hart handed it over to New Zealander, Tony Garmey of Horizon Racing and Performance in Maple Valley, Washington, for a complete restoration and race preparation. Garmey completed the restoration in record time, and went on to take 2nd in class at the Monterey Historics later that year. He would continue to race the car for the next decade, both on the West Coast and in New Zealand. He returned to the Monterey Historics in 2001 to sit on pole and win his class against Ferraris, Maseratis, and other Listers.

Since arriving at Canepa BHL121 has been mechanically sorted, and cosmetically refinished in its original stunning Crimson Red paint with Wimbledon White roundels. A hand painted number 1 is emblazoned on the side, just as it was when it raced in 1959.

The car is running period Hilborn fuel injection on its fresh 327 cu in Chevrolet fed through a T-10 4-speed dog-leg transmission. It sits on new Dunlop rubber wrapped around alloy Dunlop wheels. The wheels were handmade in Australia to be 100%

visually period correct while at the same time meeting modern racing stress specifications. The car has been fully crack checked.

Period Racing History

- Raced at Snetterton, March 22, 1959 - Driver: John Ewer
- Raced at Goodwood, March 30, 1959 - Driver: John Ewer
- Raced at Snetterton, September 6, 1959 - Driver: John Ewer, 4th Place
- Raced at Martini Trophy Silverstone meeting, May 21, 1960 - Driver: John Ewer, 3rd Place

How can anyone resist?

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So You Think You Know Everything?

- A dime has 118 ridges around the edge.
- A cat has 32 muscles in each ear.
- A crocodile cannot stick out its tongue.
- A dragonfly has a life span of 24 hours.
- A goldfish has a memory span of three seconds.
- A "jiffy" is an actual unit of time for 1/100th of a second.
- A shark is the only fish that can blink with both eyes.
- A snail can sleep for three years.
- Al Capone's business card said he was a used furniture dealer.
- All 50 states are listed across the top of the Lincoln Memorial on the back of the \$5 bill.
- Almonds are a member of the peach family.
- An ostrich's eye is bigger than its brain.
- Babies are born without kneecaps. They don't appear until the child reaches 2 to 6 years of age.
- Butterflies taste with their feet.
- Cats have over one hundred vocal sounds. Dogs only have about 10.
- "Dreamt" is the only English word that ends in the letters "mt".
- February 1865 is the only month in recorded history not to have a full moon.
- In the last 4,000 years, no new animals have been domesticated.
- If the population of China walked past you, in single file, the line would never end because of the rate of reproduction.
- If you are an average American, in your whole life, you will spend an average of 6 months waiting at red lights.
- It's impossible to sneeze with your eyes open.
- Leonardo Da Vinci invented the scissors.

- Maine is the only state whose name is just one syllable.
- No word in the English language rhymes with month, orange, silver, or purple.
- On a Canadian two dollar bill, the flag flying over the Parliament building is an American flag.
- Our eyes are always the same size from birth, but our nose and ears never stop growing .
- Peanuts are one of the ingredients of dynamite.
- Rubber bands last longer when refrigerated.
- "Stewardesses" is the longest word typed with only the left hand and "lollipop" with your right.
- The average person's left hand does 56% of the typing.
- The cruise liner, QE2, moves only six inches for each gallon of diesel that it burns.
- The microwave was invented after a researcher walked by a radar tube and a chocolate bar melted in his pocket.
- The sentence: "The quick brown fox jumps over the lazy dog" uses every letter of the alphabet.
- The winter of 1932 was so cold that Niagara Falls froze completely solid.
- The words 'racecar,' 'kayak' and 'level' are the same whether they are read left to right or right to left (palindromes).
- There are 293 ways to make change for a dollar.
- There are more chickens than people in the world.
- There are only four words in the English language which end in "dous": tremendous, horrendous, stupendous, and hazardous
- There are two words in the English language that have all five vowels in order: "abstemious" and "facetious."
- There's no Betty Rubble in the Flintstones Chewables Vitamins.
- Tigers have striped skin, not just striped fur...
- TYPEWRITER is the longest word that can be made using the letters only on one row of the keyboard.
- Winston Churchill was born in a ladies' room during a dance.
- Women blink nearly twice as much as men.
- Your stomach has to produce a new layer of mucus every two weeks; otherwise it will digest itself.

Now you know everything.

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The Stars and Stripes Forever



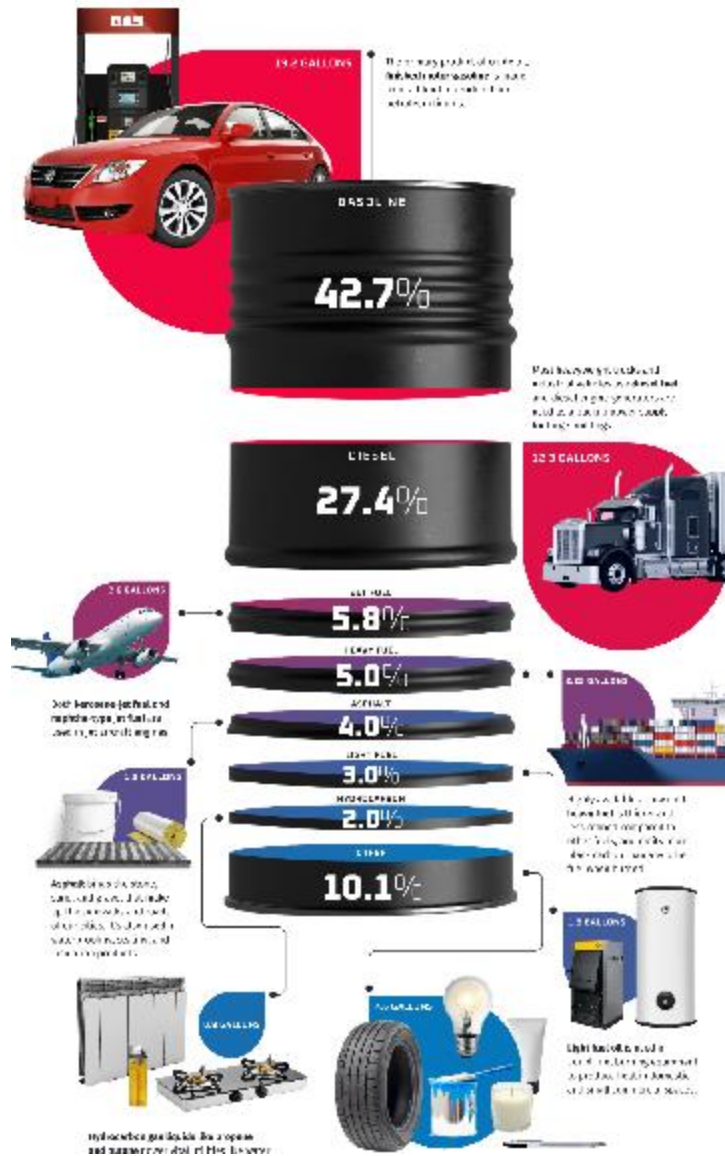
<https://www.youtube.com/watch?v=XH5erXg6IH8>

John Philip Sousa's most famous piece featuring 70 U.S. Navy Band musicians and recorded at their homes. Rousing indeed.

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What Products Are Made from a Barrel of Crude Oil?

From the gasoline in our cars to the plastic in countless everyday items, crude oil is an essential raw material that shows up everywhere in our lives.



With around 18 million barrels of crude oil consumed every day just in America, this commodity powers transport, utilities, and is a vital ingredient in many of the things we use on a daily basis.

This graphic visualizes how much crude oil is refined into various finished products, using a barrel of oil to represent the proportional breakdown.

From Crude Oil to Functional Fuel and More

Crude oil is primarily refined into various types of fuels to power transport and vital utilities. More than 85% of crude oil is refined into fuels like gasoline, diesel, and hydrocarbon gas liquids (HGLs) like propane and butane.

Along with being fuels for transportation, heating, and cooking, HGLs are used as feedstock for the production of chemicals, plastics, and synthetic rubber, and as additives for motor gasoline production.

Refined Oil Product	Share
Gasoline	42.7%
Diesel	27.4%
Jet fuel	5.8%
Heavy fuel	5.0%
Asphalt	4.0%
Light fuel	3.0%
Hydrocarbon gas liquids	2.0%
Other	10.1%

Source: Canadian Association of Petroleum Producers

Crude oil not only powers our vehicles, but it also helps pave the roads we drive on. About 4% of refined crude oil becomes asphalt, which is used to make concrete and different kinds of sealing and insulation products.

Although transportation and utility fuels dominate a large proportion of refined products, essential everyday materials like wax and plastic are also dependent on crude oil. With about 10% of refined products used to make plastics, cosmetics, and textiles, a barrel of crude oil can produce a variety of unexpected everyday products.

Personal care products like cosmetics and shampoo are made using petroleum products, as are medical supplies like IV bags and pharmaceuticals. Modern life would look very different without crude oil.

The Process of Refining Crude Oil

You might have noticed that while a barrel of crude oil contains 42 gallons, it ends up producing 45 gallons of refined products. This is because the majority of refined products have a lower density than crude oil, resulting in an increase in volume that is called processing gain.

Along with this, there are other inputs aside from crude oil that are used in the refining process. While crude oil is the primary input, fuel ethanol, hydrocarbon gas liquids, and other blending liquids are also used.

U.S. Refiner and Blender Inputs	Share
Crude oil	85.4%
Fuel ethanol	4.8%
Blending components	3.5%
Hydrocarbon gas liquids	3.0%
Other liquids	3.3%

Source: EIA

The process of refining a 30,000-barrel batch of crude oil typically takes between 12-24 hours, with refineries operating 24 hours a day, 365 days a year. Although the proportions of individual refined products can vary depending on market demand and other factors, the majority of crude oil will continue to become fuel for the world's transport and utilities.

The Difficulty of Cutting Down on Crude Oil

From the burning of heavy fuels tarnishing icebergs found in Arctic waters to the mounds of plastic made with petrochemicals that end up in our rivers, crude oil and its refined products impact our environment in many different ways.

But even as the world works to reduce its consumption of fossil fuels in order to reach climate goals, a world without crude oil seems unfathomable.

Skyrocketing sales of EVs still haven't managed to curb petroleum consumption in places like Norway, California, and China, and the steady reopening of travel and the economy will only result in increased petroleum consumption.

Completely replacing the multi-faceted "black gold" that is crude oil isn't possible right now, but as electrification continues and we find alternatives to petrochemical materials, humanity might at least manage to reduce its dependence on burning fossil fuels.

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Some Expressions You May Have Used

'A Shot of Whiskey'

In the old west a .45 cartridge for a six-gun cost 12 cents and so did a glass of whiskey.

If a cowhand was low on cash he would often give the bartender a cartridge in exchange for a drink. This became known as a "shot" of whiskey.

'The Whole Nine Yards'

American fighter planes in WW2 had machine guns that were fed by a belt of cartridges.

The average plane held belts that were 27 feet (9 yards) long. If the pilot used up all his ammo he was said to have given it the whole nine yards.

'Buying the Farm'

This is synonymous with dying. During WW1 soldiers were given life insurance policies worth \$5,000.

This was about the price of an average farm so if you died you "bought the farm" for your survivors.

'Iron-Clad Contract'

This came about from the iron-clad ships of the Civil War.

It meant something so strong it could not be broken.

'Passing the Buck / The Buck Stops Here'

Most men in the early west carried a jackknife made by the Buck Knife company. When playing poker it was common to place one of these Buck knives in front of the dealer so that everyone knew who he was. When it was time for a new dealer the deck of cards

and the knife were given to the new dealer. If this person didn't want to deal he would "pass the buck" to the next player. If that player accepted then "the buck stopped there".

`Riff Raff`

The Mississippi River was the main way of traveling from north to south. Riverboats carried passengers and freight but they were expensive so most people used rafts. Everything had the right of way over rafts which were considered cheap. The steering oar on the rafts was called a "riff" and this transposed into riff-raft – or riff-raff, meaning low class.

`Cobweb`

The Old English word for "spider" was "cob".

Ships' `State Rooms`

Traveling by steamboat was considered the height of comfort. Passenger cabins on the boats were not numbered. Instead they were named after states. To this day cabins on ships are called staterooms.

`Sleep Tight`

Early beds were made with a wooden frame. Ropes were tied across the frame in a criss-cross pattern. A straw mattress was then put on top of the ropes. Over time the ropes stretched, causing the bed to sag. The owner would then tighten the ropes to get a better night's sleep.

`Showboat`

These were floating theaters built on a barge that was pushed by a steamboat. These played the small towns along the Mississippi River. Unlike the boat shown in the movie "Showboat" these did not have an engine. They were gaudy and attention-grabbing which is why we say someone who is being the life of the party is "showboating".

`Over a Barrel`

In the days before CPR a drowning victim would be placed face down over a barrel and the barrel would be rolled back and forth in an effort to empty the lungs of water. It was rarely effective. If you are over a barrel you are in deep trouble.

`Barge In`

Heavy freight was moved along the Mississippi in large barges pushed by steamboats. These were hard to control and would sometimes swing into piers or other boats. People would say they "barged in".

`Hogwash`

Steamboats carried both people and animals. Since pigs smelled so bad they would be washed before being put on board. The mud and other filth that was washed off was considered useless "hog wash".

'CURFEW'

The word "curfew" comes from the French phrase "couvre-feu", which means "cover the fire". It was used to describe the time of blowing out all lamps and candles before sleeping for the night. It was later adopted into Middle English as "curfeu", which later became the modern "curfew". In the early American colonies, homes had no real fireplaces, so a fire was built in the center of the room. In order to make sure a fire did not get out of control during the night it was required that, by an agreed upon time, all fires would be covered with a clay pot called a "curfew".

'Barrels of Oil'

When the first oil wells were drilled they had made no provision for storing the liquid, so they used water barrels. That is why, to this day, we speak of barrels of oil, rather than gallons.

'Hot Off the Press'

As the paper goes through the rotary printing press, friction causes it to heat up. ...therefore, if you grab the paper right off the press, it's hot. The expression means to get immediate information.

There, don't you feel smarter now?

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Lou Rawls Performs a Musical Colonoscopy



<https://www.youtube.com/watch?v=QI1go72c5H8>

A bit edgy, but appropriate to the procedure.

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Putting on the Ritz: Moscow Flashdance and The Movie Monster



Цекало и Puttin` отождгли на Воробьевых горах

<https://www.youtube.com/embed/KgoapkOo4vg?rel=0&vq=highres>

In case your Cyrillic is as bad as mine, this is 'Putting on the Ritz', and I'm sorry but this is over the top as flash dances go. This came from Allen Lynch up in British Columbia and he suggests turning up the volume.

Want an English version?

Young Frankenstein <https://www.youtube.com/watch?v=ab7NyKw0VYQ>

For a remarkably terrible motion picture, Young Frankenstein will no doubt outlive many of its betters for. Bolstered by classic one-liners, "Walk this way, master," and "What knockers," or this unforgettable soft-shoe routine, Mary Shelley's iconic masterpiece never had it so...well...so different.

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A Billion Years of Geologic History is Missing from the Grand Canyon

By Stephanie Pappas for Live Science

Scientists are homing in on the mystery of the Great Unconformity.



*A view of the Grand Canyon from the Colorado River.
(Image credit: Barra Peak)*

The Grand Canyon is a layer cake of geological history, with rocks stacked neatly upon one another as they were laid down millions of years ago. That is, until you get deep into the canyon and find the Great Unconformity, a gap between rock layers representing a billion years in some places.

Even stranger, the Great Unconformity shows up in rocks worldwide, and always in rocks from the same era: about 550 million years ago and earlier.

"There are lots of unconformities that are observed locally in various places, but it's rare to have one that's observed that represents the same kind of gap in time from over a billion years ago to roughly 500 million years ago," said Barra Peak, a doctoral student in geology at the University of Colorado, Boulder.

Now, Peak and her colleagues have found that in the Grand Canyon, at least, these rock layers were lost during a tectonic upheaval caused by the breakup of a supercontinent. The findings suggest that although the Great Unconformity is found in rocks from around the world, the reason for its presence may be different in every place.

Missing layers

Though the Great Unconformity is defined by the absence of rock, its age is known from the age of the rock layers above and below the gap. Peak and her colleagues weren't interested in the age of the rock formation, but rather the time when the rocks cooled. Deeply buried rocks are in high-pressure, high-heat conditions, but cooling indicates that those rocks are being exhumed, or brought closer to the surface as the rocks above them disappear, Peak said.

"The way that happens is through erosion, so what we're trying to date is the erosion process," she said.

To do that, the researchers looked at helium trapped within the mineral zircon in the rock. Helium is a byproduct of the radioactive decay of uranium into lead. Under high

heat, helium can escape from the mineral matrix. But in cooler rocks, the helium stays trapped. Thus, measuring helium levels in a rock of a certain age can tell you when that rock reached the surface and cooled.



The Great Unconformity is visible where the horizontal layer filled with pebbles sits atop a vertical layer of rock within the Grand Canyon. Between these two layers, hundreds of millions of years of rock are missing.

(Image credit: Barra Peak)

Evolving erosion

Peak and her colleagues looked at the rock layers right under (and thus older than) the Great Unconformity from eight locations in the Grand Canyon to find out when the rock above was swept away. They found a surprising level of variability, with the western reaches of the canyon cooling 200 million years, on average, earlier than the eastern part of the canyon within Grand Canyon National Park.

The size of the Great Unconformity also differs across the canyon, with a smaller gap to the east, Peak said. At its smallest, the gap covers about 250 million years. At its largest, 1.2 billion years of rock is missing.

The overall picture suggests that the western half of what is now the canyon rose to the surface about 700 million years ago; the eastern half rose closer to 500 million years ago. But even within this broad picture, there are differences of tens or hundreds of millions of years in spots just a few dozen miles from each other.

This variability was probably caused by tectonic activity, Peak said. The supercontinent Rodinia, which came together about 1 billion years ago and broke up around 750 million years ago, was rifting apart during this time period. This rifting left a web of faults across the Grand Canyon region, many of which are still visible in the rocks today. At the time, Peak said, the pulling apart of the continent would have led to a series of high points and basins. The high points didn't have much sediment deposited on them, so their rocks were exposed, while the basins were a catchment for sediment, keeping the rocks at their base buried.

"Across the region, over millions of years, there definitely would have been erosion going on everywhere; just the extent of it would have differed on relatively small scales, tens of kilometers, potentially in some places," Peak said.

The researchers are currently using the same technique to date the erosion of the Great Unconformity in other locations around North America, she said. They also hope to look at locations outside North America. So far, preliminary evidence suggests that the date of the erosion varies a lot even within the continent, Peak said.

"What this is suggesting to us is that, rather than there being a single global cause to this feature, is that there was a lot going on within this time period of over a billion years," she said. "It's really just a coincidence that we see this unconformity corresponding to this same gap of time everywhere."

The research was published Aug. 12 in the journal Geology.

Originally published on Live Science.

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Paris' Notre Dame Cathedral Set for 2024 Reopening

By Sommer Brokaw



Firefighters battle the giant fire that engulfed Paris' Notre Dame Cathedral on April 16, 2019.

File Photo by Eco Clement/UPI

Sept. 18 (UPI) -- The Notre Dame cathedral in Paris will reopen its doors to the public in 2024, five years after a fire badly burned the landmark building, CNN reported.

Restoration group Friends of Notre Dame said in a statement Saturday that elements of the "safety phase" to secure the French Gothic architecture-style cathedral had been completed after the devastating fire collapsed its roof and spire in April 2019.

The work included wrapping and protecting the gargoyles and other sculptural elements, fortifying the most damaged pillars of the nave, reinforcing the flying buttresses, bracing gables to protect large rose windows and removing burnt scaffolding that had surrounded the spire.

"That means that we're officially saying that the cathedral is now saved, and that it's solid on its pillars, that its walls are solid," General Jean-Louis Georgelin, who is overseeing the reconstruction of the cathedral, told CNN affiliate BFMTV Saturday. "We'll be able to firmly go ahead with the phase of restoring and rebuilding the parts destroyed by the fire, so that it's ready to reopen for services and public visits in 2024."

According to the damage report, the walls of the nave, choir and two transepts suffered severe water damage and were no longer structurally sound, and the north tower belfry was partially burnt. The bells remain in place. The 250-year-old grand organ at the cathedral organ has been saved, but remains in critical condition due to water damage and lead that melted from the roof during the blaze.

Work on securing the cathedral was paused for three months last year due to the COVID-19 pandemic.

Reconstruction work is slated to begin in the coming months, according to the organization overseeing the effort, CNN reported.

A definitive cause of the 2019 fire has not been established, but prosecutors said it might have been started by a burning cigarette or electrical malfunction.

Last year, a consensus was reached to restore the cathedral to its former appearance instead of a more modern rehabilitation, France's then-incoming culture minister Roselyne Bachelot said at the time.

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Beethoven's Fifth Symphony with Body Percussion



<https://youtu.be/dejj0dIYwgE>

What a great way to bring great music into the lives of so many children. My guess is it will stay with them for a lifetime. Such a simple way to perform a miracle.

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Have You Planned for Your Retirement this Well?



*Let's see. 52 of you guys times 365 days times 25 years...that's a lot of penguin poop/
metro.co.uk*

Outside England 's Bristol Zoo there is a parking lot for 150 cars and 8 buses. For 25 years, its parking fees were managed by a very pleasant attendant....The fees for cars (\$1.40), for buses (about \$7) .

Then, one day, after 25 solid years of never missing a day of work, he just didn't show up; so the zoo management called the city council and asked it to send them another parking agent . The council did some research and replied that the parking lot was the zoo's own responsibility. The zoo advised the council that the attendant was a city employee.

The city council responded that the lot attendant had never been on the city payroll.

Meanwhile, sitting in his villa somewhere on the coast of Spain, or France, or Italy, is a man who'd apparently had a ticket booth installed completely on his own and then had simply begun to show up every day, commencing to collect and keep the parking fees, estimated at about \$560 per day -- for 25 years. Assuming 7 days a week, this amounts to just over \$7 million dollarsand no one even knows his name.

Well it's a great story, but alas it ain't true...but somebody went to the trouble of doing the math just in case it was true.

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Play Music by Tweaking and Slapping Pineapples,



<https://youtu.be/SimccVMCpv4>

Check the new vegetale set-up of 16 Pineapples, shooted in Chateau Ephémère, Paris.

Lights are triggered and synchronized with the music using Ableton and Playtronica's toolkit: Playtron, Pulse devices.

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It was considered the best photo of this century. A lioness and her cub were crossing the savannah but the heat was excessive and the cub was in great difficulty walking. An elephant realized that the cub would die and carried him in his trunk to a pool of water walking beside his mother. And we call them wild animals.

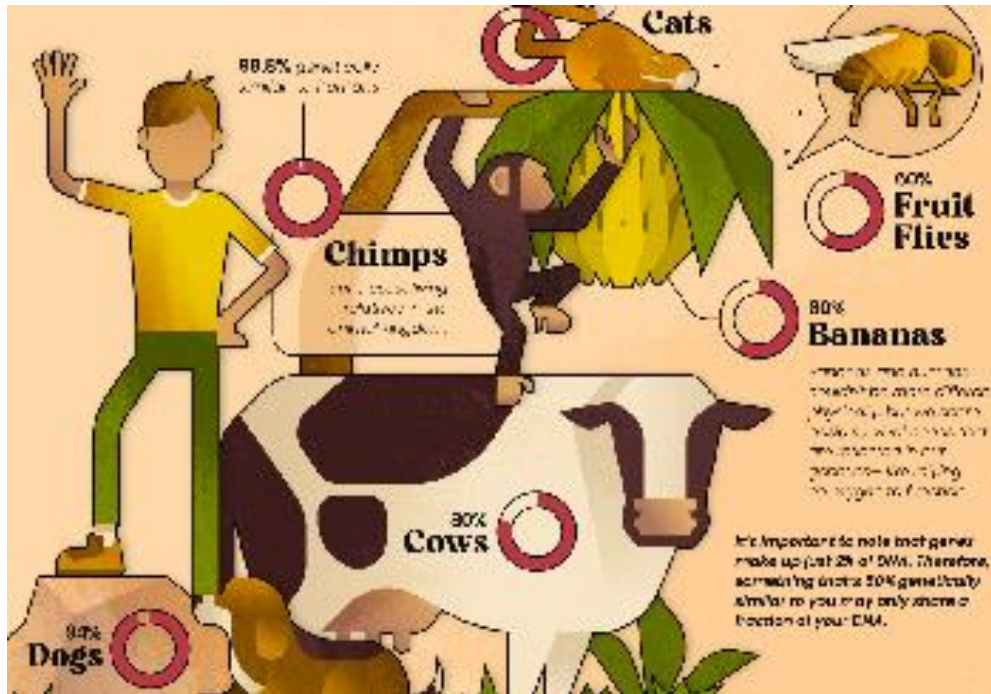
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How Genetically Similar Are We to Other Life Forms?

By Carmen Ang

Comparing Genetic Similarities Between Humans and Other Life Forms



- Chimps are 98.8% genetically similar, making them one of our closest relatives in the animal kingdom
- The genetic similarity between humans and fruit flies is 60%

Comparing Human Genetic Similarity to Other Life Forms

Of the three billion genetic building blocks that make us living things, only a handful are uniquely ours. In fact, despite our differences on the outside, humans are 99.9% genetically similar to one another.

But how alike are we to other, non-human life forms? Turns out, we're a lot more similar than you might think.

Comparative Genomics 101

First, how do scientists compare the genetic makeup of various life forms?

Comparative genomics is a branch of biology that compares genome sequences across different species to identify their similarities and differences.

This field of research is important because it:

- Helps us better understand evolution, and how living things have adapted over time.
- Builds knowledge around genes and how they influence various systems in our bodies.
- Has wider applications in agriculture, especially in conservation efforts among endangered species.

According to the National Human Genome Research Institute (NHGRI), scientists have already sequenced the genomes of more than 250 animal species, as well as 50 bird species.

Human Genetic Makeup vs. Other Life Forms

Perhaps unsurprisingly, chimps are one of our closest genetic relatives in the animal kingdom.

Because of our similarities, chimpanzees have a similar immune system to humans, which means they're susceptible to viruses such as AIDS and hepatitis.

Though chimps are one of our closest relatives, other species are strongly linked to humans as well—and not necessarily the ones you'd think.

Category	Genetic Similarity
Humans and Humans	99.9%
Humans and Chimps	98.8%
Humans and Dogs	94%
Humans and Cats	90%
Humans and Cows	80%
Humans and Fruit Flies	60%
Humans and Bananas	60%

For instance, according to NHGRI, fruit flies are 60% genetically similar to humans.

This may sound confusing at first, since humans and insects couldn't be more physically different. However, because we share many of the same essential needs to sustain life, such as the need for oxygen, these similarities are reflected in our genetics.

DNA vs Genes

It's important to note that being genetically similar to something is different than sharing the same DNA. That's because genes (the part of DNA responsible for making protein) only account for up to 2% of your DNA, while the rest of your genome is made up of what scientists call "non-coding DNA."

So while a banana is 60% genetically similar to humans, only 1.2% of our DNA is shared.

Like this? Then check out this article on Earth's Biomass

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Didgeridoo Meets Orchestra: Minimalism Hits the Outback



<https://www.youtube.com/watch?v=cLu9GmV2vF0>

William Barton using a CrookedStixz and a Bruce Rogers Didgeridoo at the Sydney Opera House with the Australian Youth Orchestra in a piece composed by Peter Sculthorpe. To see didgeridoos from these two fine craftsmen visit <http://www.spiritgallery.com.au/didge...>

Both didges went on tour to Europe with William and the AYO. Footage courtesy of the Australian Youth Orchestra.

You really should watch and listen to this. The Didgeridoo is a lot more versatile than I realized and the piece is a toe tapper.

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Cheetahs Battle Raging River

By Patrick Pester about 22 hours ago



The photo is called "The great swim" and is part of the Wildlife Photographer of the Year exhibition at the Natural History Museum, London.

(Image credit: Buddhilini de Soyza / Wildlife Photographer of the Year)

A stunning photo captures a group of cheetahs, the world's fastest land sprinters, struggling to swim through a raging river in Kenya.

The group of male cheetahs was fording the Talek River in the Maasai Mara National Reserve in an effort to access better hunting grounds. The striking photo is one of the highly commended entries in the 2021 Wildlife Photographer of the Year competition.

Buddhilini de Soyza, an investment banker and amateur photographer, took the photo on a trip to Kenya in January 2020 while with her husband and a Maasai guide, after spending several hours watching the cheetahs pace up and down the river bank. Suddenly, the lead cheetah jumped into the water, and the rest followed.

"I just couldn't believe my eyes," de Soyza told Live Science. "I don't actually remember clicking [the photo]. I obviously did because I've got a good 50, 60 shots of them crossing. All I do remember shouting is, 'Oh my god what are they going to do? They're going to die!'"

Cheetahs (*Acinonyx jubatus*) are strong swimmers, but like many cats can be hesitant around water. The river in the photo was rough following heavy rain and flooding, but the cheetahs needed to cross it to reach the larger side of their territory, which had more prey, according to de Soyza. She took the photo as the cheetahs hit the most turbulent part of the river.

"I feel like the lead cheetah is talking to me," de Soyza said of the photo. "He's looking straight at me, so it almost feels like he's just saying, 'Put down that camera and help me.'" The river's current dragged the cheetahs about 330 feet (100 meters) downstream, but they successfully made it across.

The four cheetahs in the photo are part of a group of five males called the "Tano Bora," which means "magnificent five" in Maasai or Maa, the native language of the Maasai people. The fifth cheetah was the most reluctant to enter the water and attempted the swim slightly behind the others. He disappeared underwater for 15 to 20 seconds, according to de Soyza, who feared the cheetah was done for until he reemerged and swam to safety.

"When all five of them made it across we were just celebrating," de Soyza said. "We were hugging each other, we had tears of joy in our eyes and then, it almost seemed like the cheetahs were high on adrenaline as well, as they just ran straight onto the savannah and tried to hunt."

Female cheetahs are usually solitary unless they are raising cubs, but males may live in small groups of two to three brothers or unrelated males, called "coalitions," according to the International Union for Conservation of Nature (IUCN). This makes the Tano Bora coalition of five an unusually large group. Since the photo was taken, one of the cheetahs has left the coalition, according to de Soyza.

In the weeks leading up to de Soyza's Kenya trip, relentless, unseasonable rainfall potentially tied to climate change triggered the worst flooding local elders remembered, according to the Natural History Museum, London. The cheetahs didn't attempt to swim back across the river in the days following their epic plunge, and de Soyza saw them successfully hunt a wildebeest two days later on the same side.

Wildlife Photographer of the Year is developed and produced by the Natural History Museum, London. The museum's exhibition showcasing the image of the cheetahs and other entries opens in London on Oct. 15.

Originally published on Live Science.

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How Do Cats Get Their Stripes?

By Nicoletta Lanese



Striped grey cat with green eyes sitting on a sofa
(Image credit: Getty / Victor Dyomin)

Ever wonder how your favorite furry feline got its stripes? A new study of domestic cats has revealed which genes give felines their distinctive fur patterns and hints that the same genetics may grant wild cats, such as tigers and cheetahs, their characteristic coats.

How cats get their stripes is a decades-old mystery in the life sciences, senior author Dr. Gregory Barsh, a geneticist at the HudsonAlpha Institute for Biotechnology in Huntsville, Alabama, told Live Science in an email. About 70 years ago, scientists began developing theories as to why and how organisms come to bear periodic patterns, like the stripes on a zebra or the squidgy segments of a caterpillar's body.

In some animals, like the zebrafish, these patterns emerge due to the arrangement of different types of cells. "But in mammals, the skin and hair cells are exactly the same across the entire body, and the color pattern comes about because of differences in genetic activity between, say, cells underlying a dark stripe and cells underlying a light stripe," Barsh said. So the question of how cats get their stripes comes down to how and when various genes switch on in their cells and how those genes influence the animals' development. In short, it's complicated.

But now, in a new study, published Tuesday (Sept. 7) in the journal *Nature Communications*, Barsh and his colleagues identified several genes that work together to give cats their coat patterns.

One gene, called Transmembrane aminopeptidase Q (Taqpep), they'd identified previously, in a study published in 2012 in the journal *Science*. Cats that carry one version of the Taqpep gene end up decked out in dark, narrow stripes, while those with a mutant version of the gene bear "large whorls" of dark fur; the "whorl" version of the gene is most common in feral cats.

To investigate what additional genes might shape the diverse markings on cats' coats, the team began collecting discarded tissue from clinics that spay feral cats; some of the

resected cat uteruses contained non-viable embryos, which the researchers examined in the lab.

They noticed that, at about 28 to 30 days old, cat embryos develop regions of "thick" and "thin" skin; at later stages of development, the thick and thin skin gives rise to hair follicles that produce different types of melanin — eumelanin for dark fur, and pheomelanin for light fur.

Remarkably, "the developmental mechanism responsible for color pattern takes place early in development, before hair follicles are formed and within cells that do not actually make any pigment but instead contribute to hair follicle structure," Barsh said. Spotting this pattern, the team examined which genes were active leading up to the development of the thick skin, to see if specific genes directed the patterns' formation.

The team found that, in 20-day-old embryos, several genes involved in cell growth and development suddenly switch on in the skin later destined to thicken and give rise to dark-fur-producing follicles. These genes are known to be involved in a "Wnt signaling pathway," a molecular chain reaction that drives cells to grow and develop into specific cell types, and one gene in particular, called *Dkk4*, stood out as particularly active.

Dkk4 codes for a protein that turns down Wnt signalling, and when it comes to cat fur, the tug-of-war between *Dkk4* and Wnt seems to dictate whether a patch of fur ends up dark or light, the authors found. In the dark patches, *Dkk4* and Wnt balance each other out, but in the light patches, *Dkk4* beats out the Wnt.

This finding supports a theory that computing pioneer Alan Turing developed in the 1950s, *Science* magazine reported. Turing proposed that animals' periodic patterns, like stripes, crop up when an "activator" molecule boosts the production of an "inhibitor" molecule, and these two molecules mingle in the same tissue; in this case, Wnt would be the activator and *Dkk4* the inhibitor. Following Turing's hypothesis, Barsh's team thinks that *Dkk4* spreads through tissue more quickly than the Wnt signalling travels, and that this uneven distribution generates periodic patches of light and dark in cats.

What's more, a cat's *Taqpep* genotype — meaning whether it carries the "stripe" or "whorl" version of the gene — also dictates where the *Dkk4* gene can be activated, Barsh said. "But we don't know exactly how that happens," he added. *Taqpep* codes for a protease, an enzyme that breaks down other proteins, but for now, the team doesn't know whether this enzyme affects *Dkk4* activity directly or indirectly.

As a follow-up to the embryo analyses, the team examined cat genome sequences from a database called the 99 Lives collection. They found that Abyssinian and Singapura breeds, which bear no stripes or spots and instead have a uniform appearance, carry mutant versions of *Dkk4* that disable the gene. In future work, the team wants to see whether similar mutations crop up in wild cats.

Previous studies suggested that for cheetahs (*Acinonyx jubatus*), at least, a cat's *Taqpep* genotype affects the appearance of its spots, and the same might go for *Dkk4*, the authors noted. Then there's the serval (*Felis serval*), an African wild cat that usually

sports bold, black spots but occasionally grows a coat of tiny, tightly packed specks instead. Could a Dkk4 mutation explain this variation?

"Our observations to date are only on domestic cats," Barsh said. "It is quite likely that the molecules and mechanisms studied in domestic cats apply to all of the more than 30 species of wild cats, but we will need to carry out additional studies of wild cat DNA to know that for sure."

Beyond wild cats, the team wants to study whether the same mechanisms are also at play in distantly related mammals, such as zebras and giraffes.

Originally published on Live Science.

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Electric Speed: Tesla S Plaid vs. Porsche Taycan

Watch the video showing the Plaid hotfooting it around Nürburgring.



Earlier this month, Tesla Inc. sent its high-end Model S Plaid whooshing around the Nürburgring's Nordschleife, a brutal racetrack in Germany that's often a proving ground for automakers testing their latest models and technology. Driven by a professional racer, the Plaid, which Tesla Chief Executive Officer Elon Musk has been touting as the quickest production car ever made, scorched the twisty 12.9-mile loop in 7 minutes and 35 seconds, scoring a lap record for electric vehicles.

https://www.youtube.com/watch?v=Ujp3q_aryRA

or a more leisurely trip around Laguna Seca

<https://www.youtube.com/watch?v=6hmdmYRYt9A>

The milestone wasn't just a personal victory for Musk, who tweeted out the results, but a marketing milestone for Tesla, which has been warring for electric-speed supremacy with rival Porsche Taycan, the Nürburgring's previous EV record holder. Yet the showing was a rare official entry for Musk and company, who have generally trumpeted their technical breakthroughs at controlled product events or with splashy YouTube videos. If

Tesla's cars are truly best in class, why doesn't Musk prove it in Formula E, the all-electric version of Formula One, or other motorsport leagues?

Musk himself gets that question all the time online. Auto brands, after all, from Chevrolet to Ferrari have long benefited from the halo effect of their association with racing. So, as one Twitter user asked last year, would Tesla ever consider building an official racing team? "No, we're focused on developing new products & scaling production," Musk responded. The implication is that an investment in an EV racing program would not translate to better passenger cars or manufacturing improvements, a lack of technology transfer that Audi AG and BMW AG have cited as a rationale for quitting Formula E.

Blake Fuller, a battery developer and professional driver who races Teslas independently, says Musk's reasoning is likely more complicated. Despite not having any formal Tesla backing or sponsorship, Fuller has still competitively zoomed up Colorado's Pikes Peak in a Model 3 and just last month raced a Tesla against Fords, Nissans and Subarus in New Hampshire at Mount Washington's famous, century-old hill climb.

<https://www.youtube.com/watch?v=DsfXeAJxymg>

While he'd love if Musk got into racing, he acknowledges that there are tons of risks associated with "corporate-tied" motorsport, especially for a company under as much public scrutiny as Tesla. If a Tesla crashed at a high-profile competition and injured the driver or caused the battery to ignite, would their safety credentials come under question? "The biggest concerns come down to the 'what if' factors," Fuller says.

Another reason is that the company already gets endless organic publicity from Tesla enthusiasts, without the risks inherent in corporate sponsorship. Fuller, of course, is a prime example of this dynamic, but social media is full of the Tesla faithful drag-racing against Lamborghinis and other ultra-luxe cars in videos that amass millions of views for free. As a result, Fuller says, Tesla likely doesn't need "as much marketing help launching their EVs, because they're already known to be fast and superior."

In that sense, perhaps the most obvious reason Musk will not enter Formula E or some formal head-to-head race against the likes of Porsche: He doesn't want to be in a position to potentially lose. Tesla is already synonymous with speed, whereas other EV newcomers must prove their technical bona fides. Why would Musk give that chance to Porsche or another archenemy such as Lucid Motors, which supplies batteries to Formula E? Outside Tesla's strategic sprint at Nürburgring or a few other circuit appearances over the years, the company gets far more mileage out of its in-house, choreographed competitions, like when it held a tug-of-war battle between the new Cybertruck and Ford's F-150 (which a Ford exec called misleading).

Still, Fuller says official racing could give Tesla more legitimate bragging rights—and he firmly disagrees with the notion that professional competitions wouldn't enhance their tech performance, citing braking and steering issues he believes require improvements to keep up with Porsche and other rivals. "Elon can reach out and we can make Track

Mode better 'cause there are things that suck about it," says Fuller says, laughing, referring to Tesla's racetrack setting. "But they're all fixable." —Austin Carr

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Shauna's Cruise Ship Diary



dailytelegraph.com au

DEAR DIARY - DAY 1

All packed for the cruise ship -- all my nicest dresses, swimsuits, short sets. Really, really exciting. Our local Red Hat chapter - The Late Bloomers decided on this "all-girls" trip. It will be my first one - and I can't wait

DEAR DIARY - DAY 2

Entire day at sea, beautiful. Saw whales and dolphins. Met the Captain today -- seems like a very nice man.

DEAR DIARY - DAY 3

At the pool today. Did some shuffleboard, hit golf balls off the deck. The Captain invited me to join him at his table for dinner. Felt honored and had a wonderful time. He is very attractive and attentive.

DEAR DIARY - DAY 4

Won \$800.00 in the ship's casino. The Captain asked me to have dinner with him in his own cabin. Had a scrumptious meal complete with caviar and champagne. He asked me to stay the night, but I declined. Told him I could not be unfaithful to my husband.

DEAR DIARY - DAY 5

Pool again today. Got sunburned, and I went inside to drink at piano-bar, stayed there for rest of day. The Captain saw me, bought me several large drinks. Really is quite charming. Again asked me to visit his cabin for the night. Again I declined. He told me, if I did not let him have his way with me, he would sink the ship... I was shocked.

DEAR DIARY - DAY 6

Today I saved 2600 lives.

Twice ...

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The bride's father died and donated his heart. The man who received the transplant walked her down the aisle.



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My Walking Thoughts

September 26, 2021

I haven't been doing a lot of walking lately; my back decided to declare its independence from my preferred regimen and gone on strike...hopefully for a very short while. Anyway, it doesn't stop me from thinking, hard as that may seem to others. I've approached the calamity by closing my eyes and listening for a stately clump...clump...clump that marks my passage into the world of ideas.

The Organics of Trash

I ran into something this past week that validates my belief that San Francisco lost its way back when Emperor Norton died.

It seems that the *City by the Bay* decided that the only thing standing in the way of clean streets was that its present battery of trash containers "weren't sexy enough." Nor were any of those other 'off-the-shelf' containers that could be had for a pittance. No, it was up to the City to flex its artistic muscle and develop its own, a decision that has led to the expenditure of \$427,500 with nothing but vaporware to show for it...and with nothing short of chaos in the offing.



Given my belief regarding the City's mental stability in the first place, you might wonder why I bring this to your attention at all since in the broad mesh of things it is in truth a 'what's new' ho-hummer.

Well, it hearkens to something I heard while a member of a panel discussion on fugitive landfill gas, to wit: "One third of all anthropomorphic greenhouse gas is generated by organic wastes...i.e. landfill gas."

Holy caramba! It led to my writing an editorial for MSW Management Magazine, the publication I spent more than 20 years as editor. The gist of what I had to say was:

My first thought was if that's true and if people *really* believe in the impact of human activity on the biosphere, then perhaps we ought to quit screwing around with incidental stuff like recycling or sexier waste containers and concentrate on the methanogenic aspect of the equation.

One-third, folks, that's a huge chunk of the stuff, so what is it standing in the way of doing something? *Politics? Agenda? The belief that my experts are better than your experts?*

Clearly something's going on that prevents the effective removal of LFG from the GHG equation, so perhaps a good place to start is to forget the politics, ditch the agenda, overcome the dependence on expert evaluations; and focus the one-third piece of the GHG pie purportedly coming for what it is we're responsible for.

Maybe it's not a third. Maybe it's only a quarter...or an eighth or sixteenth for that matter; surely those are things of infinite interest to bean-counters but are irrelevant to getting stuff out of the atmosphere that doesn't need to be there whether or not you believe it's at the bottom of what is portrayed as anthropomorphically triggered climate change. So, forget the hogwash and concentrate on one definable issue we *can* do something about without getting into a furbal in the process; to wit, fugitive landfill gas.

Until we deal with the issue radically, starting with the removal of organics before they get into landfills in the first place, we're shoveling sand against the tide. By the same token there are thousands of landfills—open, closed, illegal dumpsites, etc.—that need to be secured as well...but both issues exist, and should be addressed, quickly, effectively, and remorselessly without regard to such factors as stranded investment or waiting for some magic bullet from out of the blue to solve the problem for us.

How do we do this? Well, that's the subject for another ~~fant~~...uh serious study, but technologies for accomplishing the task are already in operation and once any serious effort begins there will be many more to follow.

In addition, we need to know how much landfill gas is entering the environment, why, and from where, all of which are the subject of formal analyses, many underway as we speak.

For us, however, the essential step is the determination to do something, not because of some philosophical or metaphysical cant, but because the situation is real, it is ours, and it is something from which we can really carve a huge chunk without having to get into each other's face in the process.

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Root 66



Panhandling the Panhandle

Last seen, Tom and I were hot-footing it across the wide Mississippi, into Louisiana then Mississippi, where, after taking on a little sustenance for ourselves and auto in Gulfport, leapfrogged into and out of Alabama and on to Florida, which surprisingly was both cooler and less humid as we arrived in the bustling city of Pensacola, a town I was going to know quite well two years later as a student Naval Aviator.

At the moment, however, we felt flush enough to look for a watering hole to slake our thirst, settling on a joint called Trader Jons, unknown to us at the time as the Holy See of Naval Aviation, christened so as the off-base home-away-from-home to fully-fledged aviators (rarely students who found themselves ignored by staff and clientele alike) drawn there by the age-old need to recount tales of dubious authenticity of past glories.

We learned quickly to protect ourselves from the flying suds and thrashing hands put into darkened surrounds by grizzled pelicans intent on tracing improbable air-to-air combat maneuvers to the general approbation of the initiated...which we certainly were not.

When no one there offered to buy us a second beer—no big deal since I’ve never liked the stuff anyway--we bid adieux to the beer-stained icon and continued our eastward march, wondering just what kind of maniacs the nation was entrusting its defense to.

Which brought us bye-and-bye to Panama City where after another sleeping bag slumber within sight and sound of the ocean, we encountered a slight glimmer of wondrous adventures that lay ahead.

Next week

“It’s paid for so have a ball.”

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