

Ode to E Pluribus Unum for Sunday November 20 2022

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The Protostar within L1527



*Image Credit: Science - NASA, ESA, CSA, STScI, NIRCarn
Processing - Joseph DePasquale (STScI), Anton M. Koekemoer (STScI), Alyssa Pagan (STScI)*

The protostar within dark cloud L1527 is a mere 100,000 years old, still embedded in the cloud of gas and dust that feeds its growth.

In this NIRCAM image from the James Webb Space Telescope, the dark band at the neck of the infrared nebula is a thick disk that surrounds the young stellar object. Viewed nearly edge-on and a little larger than our Solar System, the disk ultimately supplies material to the protostar while hiding it from Webb's direct infrared view. The nebula itself is seen in stunning detail though.

Illuminated by infrared light from the protostar, the hourglass-shaped nebula's cavities are created as material ejected in the star-forming process plows through the surrounding medium. As the protostar gains mass it will eventually become a full-fledged star, collapsing and igniting nuclear fusion in its core. A likely analog to our own Sun and Solar System in their early infancy, the protostar within dark cloud L1527 lies some 460 light-years distant in the Taurus star-forming region.

Webb's NIRCAM image spans about 0.3 light-years.

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The Bizarre Bird That's Breaking the Tree of Life

Darwin thought that family trees could explain evolution. The hoatzin suggests otherwise.



https://www.newyorker.com/science/elements/the-bizarre-bird-thats-breaking-the-tree-of-life?utm_source=join1440&utm_medium=email

This New Yorker piece suggests that evolution holds inconsistencies that require some rethinking.

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Tentacle Robot Can Gently Grasp Fragile Objects

Jellyfish-like soft gripper mimics the mechanics of curly hair

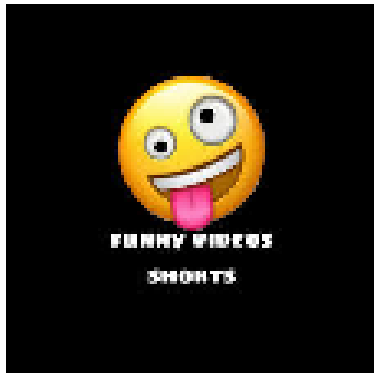


*The gripper wrapping around a succulent.
(Credit: Harvard Microrobotics Lab/Harvard SEAS)*

https://seas.harvard.edu/news/2022/10/tentacle-robot-can-gently-grasp-fragile-objects?utm_source=join1440&utm_medium=email

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Some Short Funnies...or Maybe Funny Shorts



<https://youtu.be/eBiFSH2fgek>

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**Everyone Knows that Hydrogen Fuel Autos Are a Boondoggle,
Right?**



https://www.hydrogenfuelnews.com/hydrogen-cars-bmw-zipse/8555643/?awt_a=1jpsU&awt_l=K1zyC&awt_m=gCTP1sLMce5DIsU

Well maybe not everyone. Here's an interesting perspective.

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Lt. Mallory Kingsington on the Queen's Smile and Sense of Humor



I was honored to be selected by Colonel Gerald to be one of the Queen's 50 Royal Guard of Honor Horsemen when we welcomed US President Ronald Reagan to London.

Each of the 50 guards displayed a flag representing one of the 50 States in the US. My flag was for Idaho, a state I'd never heard of. All the guards and their horses were trained to be completely stationary for formal events such as this.

The Scots Guard (25 guardsmen) were in exact formation and full uniform to the right of Her Majesty The Queen and Colonel Gerald. To the left on the Queen and Colonel Gerald was the Queen's Company Grenadier Guards (25 guardsmen), also in full uniform and exact formation.

As meticulously trained to do so, all 50 Guards and their horses were at attention and waited silently for the President of the United States as his limo approached the Queen and Colonel Gerald.

Suddenly the silence was broken by Colonel Gerald's horse erupting with horse farts at full volume for over minute. Colonel Gerald, adjacent to Her Majesty The Queen remained at full and proper attention.

Once his horse stopped the embarrassing discharge our prim and proper Colonel Gerald stared straight ahead at the President's oncoming limo and offered an apology saying, "Truly sorry about that your Majesty!"

Her Majesty the Queen replied in a sweet and wonderful voice, "That's alright Gerald, I thought it was your horse!"

All 50 guardsmen silently cried with laughter, and in the Honor Guard's traditional sign of approval, tapped their rifle butts on the pavement.

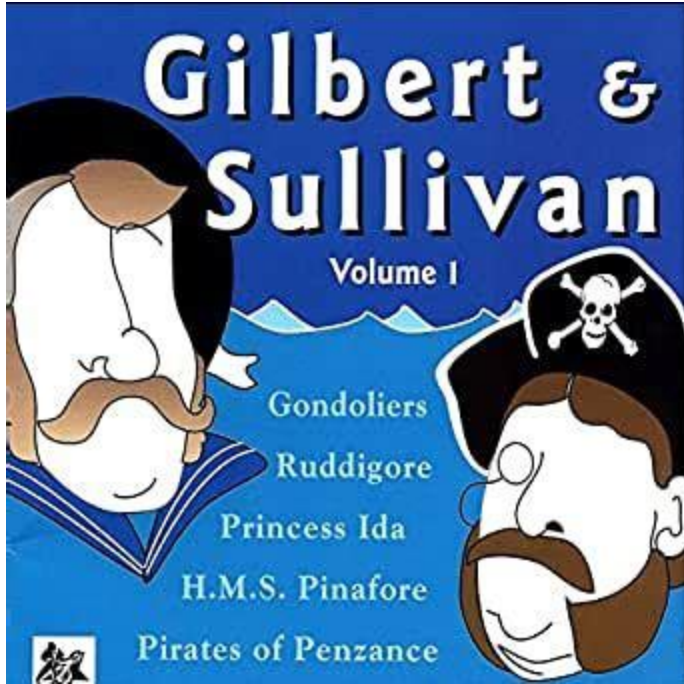
From that moment on I and every other man there adored her!

---Lt. Mallory Kingsington



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Messing with the Major General Song



Traditional version <https://youtu.be/zSGWoXDFM64>

John Lithgow's version <https://youtu.be/yD9NbN2ez-Q?t=9>

It lives on...and on.

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The Devil's Details Belong to a Higher Power



<https://youtu.be/n40hScS3ez8>

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The Stunt that Helped Launch America as an Air Power

In 1919, with the future of American aviation taking a nosedive, the iconoclastic man who would later be known as the father of the Air Force proposed a solution: a brutal cross-country air race.



Billy Mitchell's transcontinental air race, a contest over several weeks in October 1919, was true to his bold, sometimes reckless personality.

U.S. Air Force via Wikimedia Commons

<https://www.politico.com/news/magazine/2022/11/13/the-great-american-air-race-00066258>

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Algorithm that 'Reads' People's Thoughts from Brain Scans

Using fMRI, scientists decoded what people were hearing and thinking.



Scientists used a computer algorithm and a brain scanning technique called fMRI to "read" peoples' minds.

(Image credit: Aja Koska via Getty Images)

https://www.livescience.com/algorithm-mind-reading-from-fmri?utm_campaign=368B3745-DDE0-4A69-A2E8-62503D85375D

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Cobra Bites Boy, Boy Bites it Back

An 8-year-old boy recently killed a venomous cobra in India after receiving a venom-free "dry bite" from the snake and then biting back in retaliation.



https://www.livescience.com/child-kills-venomous-cobra?utm_campaign=368B3745-DDE0-4A69-A2E8-62503D85375D

Don't mess with Deepak.

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30-Year Waitlist for Japanese Beef Croquettes



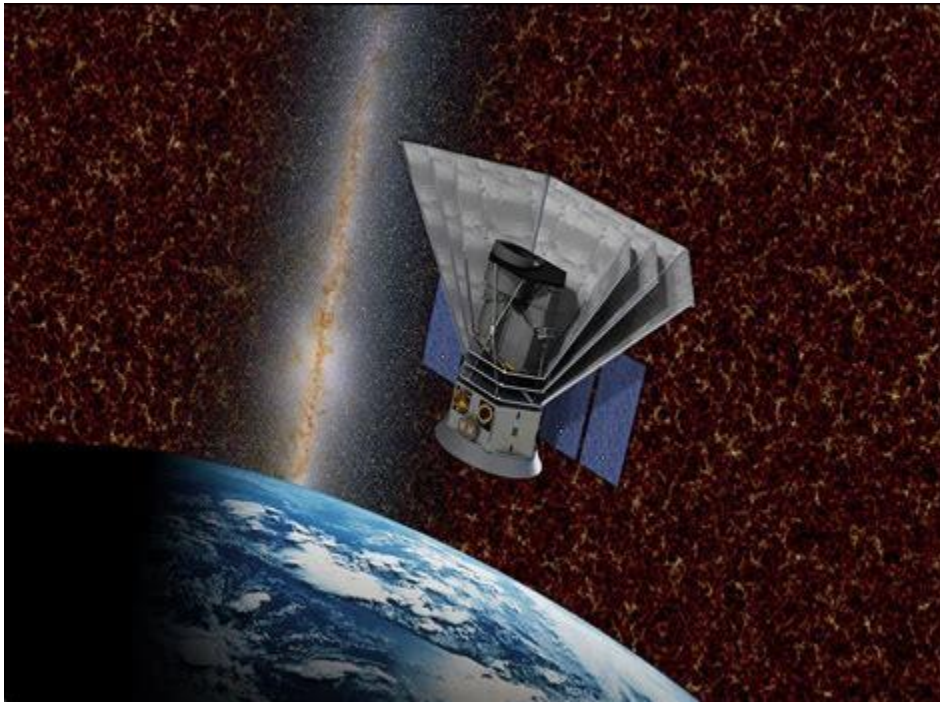
*Extreme croquettes are made with three-year-old female A5-ranked Kobe beef.
Asahiya*

https://www.cnn.com/travel/article/japan-kobe-beef-croquettes-30-year-waitlist?utm_source=join1440&utm_medium=email&utm_placement=newsletter

Great opportunity for people on a diet.

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NASA Finalizes Plans for Its Next Cosmic Mapmaker



The SPHEREx mission will have some similarities with the James Webb Space Telescope. But the two observatories will take dramatically different approaches to studying the sky.

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Rock Structures Among The Oldest Signs Of Life On Earth

By Stephanie Pappas

Fossils called stromatolites from Western Australia were created by microbes 3.48 billion years ago.



A sample of Dresser Formation stromatolite, showing a complex layered structure formed of hematite, barite, and quartz, and a domed upper surface.

(Image credit: Keyron Hickman-Lewis)

Layered rocks in Western Australia are some of Earth's earliest known life, according to a new study.

The fossils in question are stromatolites, layered rocks that are formed by the excretions of photosynthetic microbes. The oldest stromatolites that scientists agree were made by living organisms date back 3.43 billion years, but there are older specimens, too. In the Dresser Formation of Western Australia, stromatolites dating back 3.48 billion years have been found.

However, billions of years have wiped away traces of organic matter in these older stromatolites, raising questions about whether they were really formed by microbes or whether they might have been made by other geological processes.

The new study's verdict: It was ancient life.

"We were able to find certain specific microstructures within particular layers of these rocks that are strongly indicative of biological processes," said Keyron Hickman-Lewis (opens in new tab), a paleontologist at the Natural History Museum in London, who led the research.

Microbial mats

The findings could have implications for the search for life on Mars, Hickman-Lewis told Live Science. The stromatolites in the Dresser Formation are encrusted in iron oxide from the reaction of iron with oxygen in the atmosphere. Mars' surface is similarly oxidized — thus the rusty orange color — but its rocks could hold similar structures left behind by ancient Martian life, Hickman-Lewis said.

Hickman-Lewis and his team examined Western Australian stromatolites first discovered in 2000 by study co-author Frances Westall(opens in new tab) at the National Center for Scientific Research (CNRS) in France. They used a variety of high-resolution 2D and 3D imaging techniques in order to peer into the layers of the stromatolite at a fine scale.

What they saw hinted at biological growth in all its messy glory. The researchers observed uneven layers, including little dome shapes that are indicative of photosynthesis, since microbes with the most access to the sun will grow more vigorously than those not as high in the structure. They also saw columnar structures that are typical in modern stromatolites, which are still found in a few locations around the globe.

"Microbial mats give you layers that are uneven in their thickness and tend to be wrinkly or crinkly or go up and down on very small spatial scales," said Linda Kah(opens in new tab), a sedimentologist and geochemist at the University of Tennessee who was not involved in the new study. Putting all the structural clues together, she told Live Science, "you end up with what looks like the characteristics of a microbial mat."

Martian microbes?

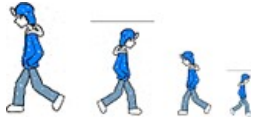
The evidence that the Dresser Formation stromatolites are signs of ancient life doesn't make them the oldest life on the planet. That (possible) honor may go to stromatolites found in 3.7 billion-year-old rock in Greenland, or possibly to microfossils from Canada that might be as old as 4.29 billion years. It's very difficult to distinguish biological life from non-organic processes in these very old rocks, however, so these finds and others from a similar timeframe are controversial.

Based on the minerals in the stromatolites, the Western Australia microbial mats probably formed in a shallow lagoon fed by hydrothermal vents that was also connected to the ocean, the researchers reported Nov. 4 in the journal *Geology*(opens in new tab).

The techniques used to study the Western Australian stromatolites could be useful for seeking life on Mars, Hickman-Lewis said, especially if Mars samples can be returned to Earth.

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My Walking Thoughts for



Sunday November 20 2022

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Outtakes from my Novel

Quite a few at this juncture with more to come. This and the next three formed the prolog that got in the way of the action and hit the cutting room floor.

Prolog: Outward Bound

At first Gordon thought the fault lay with the clock above the world map with the pins stuck in it representing all the places they had read about during the year. There were far too few such markers as far as Gordon was concerned, the bulk in the southern end of the San Joaquin Valley, with just a sprinkling throughout the rest of the United States. Other parts of the world had felt not so much as a prick of interest and enthusiasm.

At fourteen years of age and in the eighth grade, Gordon had travelled further in his mind's eye than most of his classmates, indeed most of the people in the district, ever would in any real or imagined state. It was to be the bane of his existence and he was becoming aware of the waste of such precious time in pursuits that did not include journeys to distant lands, recognizing such losses as irreplaceable. Already he had begun to realize there just wasn't any way to slow the passage of time.

But on this particular Friday, Gordon was having difficulty coming to grips with the other side of time's two-edged sword, being more immediately concerned with the barrier time threw between him and 4:35 that afternoon when he was to board an aircraft at the Bakersfield Airport for a flight to San Francisco.

Uncle Joe and Pastor Jacobs were representing their small congregation at the great Southern Baptist Convention that had somehow found its way out of the southeastern United States and, since it was on this side of the country for once, the vestry had come up with the funds to send the pastor and one of the deacons to the City by the Bay. Uncle Joe was selected because his name was picked from the hat and Gordon got to go along because Aunt Claire was sick enough of his carrying's on to intercede on his behalf.

Unfortunately, none of them; Joe; Claire, Pastor Jacobs, Gideon the mule, not the Good Lord Himself; could do a thing to hurry the clock, any more than they could halt the advance of storm clouds that gathered to the north and stalked resolutely down the perennially fertile valley, spreading gloom and finally badly needed rain across the thirsty land.

It didn't help a bit that the dripping of the down spout which began far slower than the clock's methodical "tick... tock... tick... tock" soon caught and then surpassed the mechanical cadence, reinforcing Gordon's suspicion that time was indeed coming to a standstill. Worse yet was Mrs. Jennings's fear of lightning, which meant that studies and recess were dropped from the regular curriculum, giving way instead to "games."

Those games, Gordon had long since decided, were punishments inflicted on those with imagination by those who lacked it, when there were puddles to be kicked and mud to be explored. Mrs. Jennings particularly liked "Charades" which made no sense at all to Gordon. If you played the game and guessed the answer, all that happened was that Mrs. Jennings started a new game.

The longer the game went on, the slower the clock hands moved, until when Sandra Stryker got her turn, they stopped completely. By the time Mr. Ferris rewound the spring and used his clock-setting stick to reposition the hands, school was over, and they had to dash to catch the district bus monopolized by the noisy high-schoolers.

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