

Welcome to the September 6th, 2017, Edition of THE REVENGE HUMP DAY!

We celebrated Labor Day at Casa Bolgeo with a small party for most of the clan here. Most of the clan but minus the Sprakers. Alexander the Grape is recuperating at Dereks' for have 4 wisdom teeth removed last Friday. SHE WHO MUST BE OBEYED has been making daily checks on his and he is on the mend. He should be able to go back to school today. Brandy and Beth, Destroyer of Worlds, spent the weekend in Hotlanta at DragonCon Celebrating Beth's 14th birthday. I called Beth up on Sunday and sang Happy Birthday to her. It was great hearing from her, but I wished she would have been here so that we could truly celebrate her birthday together. I know that Brandy and Beth had a great time at DragonCon and I hope that she will write me a con report for next week's missive.

One of the high points of the Labor Day Gathering was watching the Tennessee versus Georgia Tech Football Game. When I went to bed, Georgia Tech was beating the holy hell out of Tennessee. But Cousin Carol told me this morning that Tennessee came back and beat Georgia Tech in the second overtime period. I guess that I am not Tennessee's luck rabbit's foot when I watch the game on TV.

One thing I found out that made me extremely happy this weekend was that two readers of this missive won a prestigious Dragon Award. Larry Correia and John Ringo won the Dragon Award for Best Fantasy Novel for Monster Hunter Memoirs: Grunge. This was a great book and both Larry and John deserve this great honor. Hats tips to both of my friends for their achievement.

So on that "happy note", why don't y'all sit back and relax because here's the best in gossip, jokes and science for your reading pleasure!

Uncle Timmy

<G>~<O>~<S>~<S>~<I>~<P>~<S>~<T>~<A>~<R>~<T>~<S>~<H>~<E>~<R>~<E>~<I>

WINNERS OF THE 2017 DRAGON AWARDS

From: "Tim Bolgeo" tbolgeo@epbfi.com

Here are the winners of the 2017 Dragon Awards

Winners include the latest Expanse novel, Stranger Things, and Wonder Woman

by Andrew Liptak@AndrewLiptak Sep 3, 2017, 5:52pm EDT

<https://www.theverge.com/2017/9/3/16248888/dragon-award-dragoncon-sci-fi-fantasy-books->

DragonCon was held this past weekend in Atlanta, Georgia, and the convention announced today the recipients of the second annual Dragon Awards. The prize is designed to be a "true reflection" of what science fiction and fantasy fans like and enjoy, and was marked with some controversy earlier this summer.

This year's winners included the latest Expanse novel from James S.A. Corey, Babylon's Ashes, as well as Larry Correia and John Ringo's Monster Hunter Memoirs: Grunge, Cory

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Doctorow's Walkaway, Netflix's Stranger Things, and Nintendo's The Legend of Zelda: Breath of the Wild. A full list of the winners can be seen below.

The awards were founded as an alternative to the better-known Hugo Awards, issued annually at the World Science Fiction convention, and includes a range of novels, comics, video games, television shows, and movies.

FROM OUR SPONSOR

This year's awards were not without some controversy: several authors complained that the stories they were nominated for were being used by right-wing groups as a sort of proxy in a genre culture war. The convention initially refused to let them withdraw their works from the ballot, but later backtracked and permitted them to remove themselves. One of the authors who backed out of the ballot, N.K. Jemisin, did come away from the convention with an award: the Eugie Foster Memorial Award for Short Fiction, for her story "The City Born Great", although this is unrelated to the Dragon Awards.

Here are the winners:

BEST SCIENCE FICTION NOVEL

Babylon's Ashes by James S.A. Corey

BEST FANTASY NOVEL (INCLUDING PARANORMAL)

Monster Hunter Memoirs: Grunge by Larry Correia and John Ringo

BEST YOUNG ADULT / MIDDLE GRADE NOVEL

The Hammer of Thor by Rick Riordan

BEST MILITARY SCIENCE FICTION OR FANTASY NOVEL

Iron Dragoons by Richard Fox

BEST ALTERNATE HISTORY NOVEL

Fallout: The Hot War by Harry Turtledove

BEST APOCALYPTIC NOVEL

Walkaway by Cory Doctorow

BEST HORROR NOVEL

The Changeling by Victor LaValle

BEST COMIC BOOK

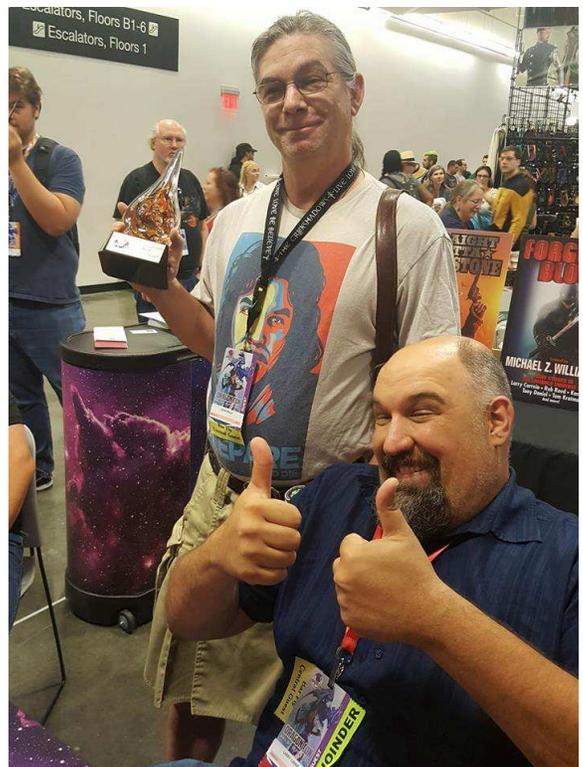
The Dresden Files: Dog Men by Jim Butcher, Mark Powers, Diego Galindo

BEST GRAPHIC NOVEL

Jim Butcher's The Dresden Files: Wild Card by Jim Butcher, Carlos Gomez

BEST SCIENCE FICTION OR FANTASY TV SERIES

Stranger Things, Netflix



BEST SCIENCE FICTION OR FANTASY MOVIE

Wonder Woman directed by Patty Jenkins

BEST SCIENCE FICTION OR FANTASY PC / CONSOLE GAME

The Legend of Zelda: Breath of the Wild by Nintendo

BEST SCIENCE FICTION OR FANTASY MOBILE GAME

Pokémon GO by Niantic

BEST SCIENCE FICTION OR FANTASY BOARD GAME

Betrayal at House on the Hill: Widow's Walk by Avalon Hill

BEST SCIENCE FICTION OR FANTASY MINIATURES / COLLECTIBLE CARD / ROLE-PLAYING GAME

Magic the Gathering: Eldritch Moon by Wizards of the Coast

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SYFY'S KILLJOYS RENEWED FOR TWO FINAL SEASONS, BUT DARK MATTER IS CANCELLED

Julie Muncy, September 2, 2017

<http://io9.gizmodo.com/syfys-killjoys-renewed-for-two-final-seasons-but-dark-1798727148>



Image: Syfy

SyFy's story of interplanetary bounty hunters Dutch, Jon Jaqobis, and D'avin Jaqobis is getting two more seasons to wrap up its story and gracefully exit the stage. Unfortunately, another Syfy show didn't get so lucky

The news comes yesterday evening via Entertainment Weekly, who reported the renewal just before the third season finale of Killjoys aired last night. The final episode order is for 20 episodes over the course of two seasons, with the fourth season slated to air sometime next year. The series, which typically follows the adventures of three bounty hunters serving the Reclamation Apprehension Coalition, has deviated in season three, pitting the protagonists against the superpowered, parasitic Hullen.

“This renewal is the kind of privilege every creator hopes for—a chance to plan the end of your story with the luxury of 20 episodes to do it,” creator Michelle Lovretta, who also created *Lost Girl*, said in a statement.

Unfortunately, the creators of *Dark Matter*, another Syfy space show, won't be getting that luxury, as the network has declined to renew it. The show also recently finished airing its third season, and will not get the chance to finish a planned five-season story arc for the crew of the *Raza*. Creator Joseph Mallozzi took to his blog to confirm the news shortly after, noting in a brief comment, “To say I'm incredibly disappointed would be an understatement.”

Can't blame him there. It's a turbulent day for fans of televised space opera. Long live *Killjoys*, and may *Dark Matter* not be forgotten.

[Entertainment Weekly, with additional info via The Verge]

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GERMAN WONDERLAND

From: "Jim Woosley" Jimwoosley@aol.com

Remember the two brothers, in Germany, who had a wonderful model railway that was something to see? This is an update for their German Wonderland.

There have been little clips about this place for the past few years, it is still not finished but is growing to that conclusion as they will soon run out of space.Â

A short review, it was started by two brothers as a place to show their hobby, it started growing by leaps & bounds. Soon they were joined by other 'Model Railroad Clubs' and other craftsmen. Some were electricians, model makers, Carpenters, computer programmers. Their wives would stop by to see what they were doing and usually bring them a lunch. One thing led to another. Three of the ladies had worked at a bakery. Several visitors would ask if they had a snack bar. The Idea was planted; some of the carpenters came and built a nice restaurant area for the bakery and a kitchen too. If the fresh Coffee smell didn't get you then the bakery definitely would.Â Â

This was about 5 years ago. One of the Breweries came and furnished all of the tables and chairs, serving counter, etc.. Their latest finished area is the airport.Â Planes look like they are flying and landing.Â

GERMAN WONDERLAND link below - AMAZINGÂ Â Â

https://www.youtube.com/embed/ACkmg3Y64_s?rel=0

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ARKADELPHIA FIREFIGHTERS USE BOAT TO BATTLE HOUSTON HOUSE FIRE DURING FLOOD

From: "Mel Boros" boros@pobox.com

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by Kristen Wilson, Thursday, August 31st 2017

<http://katv.com/news/local/arkadelphia-firefighters-help-houston-crews-battle-house-fire-in-floodwaters>



Arkadelphia fire fighters help the Houston Fire Department put out a blaze by using their boat's motor to shoot out water on the flames. (Photo courtesy: Beau Bishop)AA

HOUSTON (KATV) — It's the true spirit of Arkansas. Arkadelphia firefighters who were in Houston to help got creative when assisting the Houston Fire Department put out a structure fire during flooding caused by Hurricane Harvey.

Firefighter Beau Bishop tells KATV when the hurricane hit Texas, he and firefighter Jason Hunt asked the chief if they could help. The city was ready and willing to send assistance.

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Bishop and Hunt were in the middle of rescuing victims in the Houston metro area when they saw a fully-involved structure fire. After getting the victims in their boat to safety, they went over to assist.

At first, Hunt and a Houston firefighter took turns going underwater to try and connect their approximately 400 feet of hose to a hydrant, but the hose wasn't putting out the amount of water they needed.

That's when firefighters got creative. Video taken by Bishop shows how they were able to use a boat to spray water on the house and extinguish the flames.

Bishop says the technique they used was inspired by hunters who use the boat motor to blow out ice on frozen water.

Instead, after bracing the boat so the propulsion would not move them, they were able to use the jet motor to shoot out water on the flames.

Their story also got national attention, with the Washington Post featuring the rescue in video posted to its site.

The firefighters say they aren't sure what the fuss was about - they were just there to help out and they are thankful their city was willing to send them.

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There is a great video at the end of the article to show you how they did it. Redneck Ingenuity at it's best! UT

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Re: The August 30th, 2017 Edition of THE REVENGE HUMP DAY!

From: "Eric Jamborsky" mrsolo1@comcast.net

I am always a little amused by people's total ignorance of the Late Unpleasantness. First, the Confederacy was not trying to "destroy" the country. They were exercising the same rights as the original 13 colonies, trying to leave a government that was becoming increasingly hostile. Second, Lincoln did more to turn it into it into a shooting war. There were attempts to have a peace conference whose stated goal was to reconcile the nation. That did not suit old Abe's goals.

Four states, Tennessee, Virginia, North Carolina, and Arkansas did not vote for secession when the issue was slavery. They only voted to leave when Lincoln called for 100,000 volunteers to invade the South.

There was a Jew, Judah Benjamin, in Davis's cabinet, first as Secretary of War, then Secretary of State. Lincoln had none.

Ulysses S Grant was a rabid anti-Semite; at one point ordering all Jews out of the district he commanded. Lincoln forced him to rescind the order.

Grant, Sherman, and Sheridan started to develop the genocidal tactics they would later use against the Plains Indians. Washita is an example. The Little Big Horn was intended to be another example, but Sitting Bull had other ideas.

Both sides had Braves and Knaves. John B. Floyd (Virginia), and Gideon Pillow (Tennessee) both showed their true colors (yellow) at Fort Donelson. John Reynolds and John Buford helped save the first day at Gettysburg for the Union, Reynolds at the cost of his life.

Veterans of the North and South reconciled. There are many photos and motion pictures that show this. There were Union Veterans who helped raise money for some of the Confederate soldiers monuments. They could reconcile, but it seems today's Left wants to undo over a century of progress so they can act Superior and show that they "care".

Eric Jamborsky

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Well said Eric. I had a history teacher in high school who made us study the civil war in detail because he also believed that those who don't know history were destined to repeat it. Slavery was just one issue involved with the war and didn't become one of the major ones until Abraham Lincoln issued the Emancipation Proclamation. One of the biggest was when the northern states voted to increase tariffs into and out of this country in order to keep the South from developing industries of it's own so that they would only be able to buy goods from the Northern states. The North had a strangle hold on the commerce of the nation that was strangling the South. But hey, don't take my word for it, just pick up a 40 year old high school history and read the chapters on the civil war. I didn't say a modern history book because they are so full of revisionist history that you would never know what is true and what is Politically Correct 'Adjustments'. UT

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Re: Cajun Navy rescuing Houstonians during the hurricane

From: "Pam Adams" pamcrippenadams@gmail.com

Yay for the Cajun Navy!

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Re: 'Gone With the Wind' removed from Memphis film festival because it was considered racially insensitive.

From: "Jerry Pournelle" jerry@jerrypournelle.com

Do agree: Gone With the Wind may not be my "favorite" movie of all times. But I suspect it had more effect on my life than any other ever has, with the possible exception of Caesar and Cleopatra.

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Re: 'Gone With the Wind' removed from Memphis film festival because it was considered racially insensitive.

From: "Karon L. Adams" karon@karonadams.com

Guess I'll be watching Gone With the Wind tomorrow. All day, maybe twice.

<T>~<H>~<E>~<J>~<O>~<K>~<E>~<S>~<S>~<T>~<A>~<R>~<T>~<H>~<E>~<R>~<E>

From: "Bob Bolgeo" bbolgeo@aol.com

THE INSURANCE SALESMAN = ABSOLUTELY BRILLIANT !!!

Those who have experience with Cajuns will recognize the hero of this story = born to sell!

Boudreaux, the smoothest-talking Cajun in the Louisiana National Guard, got called up to active duty.

Boudreaux's first assignment was in a military induction center. Because he was a good talker, they assigned him the duty of advising new recruits about government benefits, especially the GI insurance to which they were entitled.

The officer in charge soon noticed that Boudreaux was getting a 99% sign-up rate for the more expensive supplemental form of GI insurance.

This was remarkable, because it cost these low-income recruits \$30.00 per month for the higher coverage, compared to what the government was already providing at no charge. The officer decided he'd sit in the back of the room at the next briefing and observe Boudreaux's sales pitch.

Boudreaux stood up before the latest group of inductees and said, "If you has da normal GI insurans an' you goes to Afghanistan an' gets youself killed, da govment' pays you benefishery \$20,000. If you takes out da supppmental insurans, which cost you only t'irty dollars a munt, den da governmen' gots ta pay you benefishery \$400,000!

"Now," Boudreaux concluded, "which bunch you tink da governmen' gonna send ta Afghanistan first?"

<J>~<O>~<K>~<E>~<S>

Irish Jokes

An Irishman's first drink with his son

While reading an article last night about fathers and sons, memories came flooding back to the time I took me son out for his first pint. Off we went to our local pub only two blocks from the cottage.

I got him a Guinness. He didn't like it, so I drank it.

Then I got him a Kilkenny's, he didn't like that either, so I drank it. Finally, I thought he might like some Harp Lager? He didn't. I drank it.

I thought maybe he'd like whisky better than beer so we tried a Jameson's; nope!

In desperation, I had him try that rare Redbreast, Ireland's finest whisky. He wouldn't even smell it.

What could I do but drink it!

By the time I realized he just didn't like to drink, I was so shit-faced I could hardly push his stroller back home!!!

Irish Confession

I went into the confessional box after many years of being away from the Catholic Church.

Inside I found a fully equipped bar with Guinness on tap. On one wall, there was a row of decanters with fine Irish whiskey and Waterford crystal glasses. On the other wall was a dazzling array of the finest cigars and chocolates.

When the priest came in, I said to him, "Father, forgive me, for it's been a very long time since I've been to confession, but I must first admit that the confessional box is much more inviting than it used to be."

He replied, "You moron, you're on my side."

~~~~~

#### **Some Light Dublin Traffic Humor**

A car full of Irish nuns are sitting at a traffic light in downtown Dublin when a bunch of rowdy drunks pull up alongside of them.

"Hey, show us yer teets, ya bloody penguins." shouts one of the drunks. Quite shocked, Mother Superior turns to Sister Mary Immaculata and says, "I don't think they know who we are; show them your cross."

Sister Mary Immaculata rolls down her window and shouts, "Piss off, ya fookin' little wankers, before I come over there and rip yer balls off." She then rolls up her window, looks back at Mother Superior quite innocently, and asks, "Did that sound cross enough?"

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AN IRISH BLONDE IN A CASINO

An attractive blonde from Cork, Ireland arrived at the casino. She seemed a little intoxicated and bet twenty-thousand Euros on a single roll of the dice.

She said, "I hope you don't mind, but I feel much luckier when I'm completely naked."

With that, she stripped from the neck down, rolled the dice and with an Irish brogue yelled, "Come on, baby, Mama needs new clothes!"

As the dice came to a stop, she jumped up and down and squealed: "YES! YES! I WON, I WON!"

She hugged each of the dealers and then picked up her winnings (and her clothes) and quickly departed.

The dealers stared at each other dumbfounded. Finally, one of them asked, "What did she roll?"

The other answered, "I don't know - I thought you were watching the dice."

MORAL OF THE STORY:
Not all Irish are drunks.
Not all blondes are dumb.
But all men....are men.

~~~~~

### **Irish Fun**

Mick says to Paddy: "Close your curtains the next time you're shagging your wife. The whole street was watching and laughing at you yesterday."

Paddy says: "Well the joke's on them stupid bastards, because I wasn't even home yesterday."

~~~~~

Paddy & Mick find three grenades, so they decide to take them to a police station.

Mick: "What if one explodes before we get there?"

Paddy: "We'll lie and say we only found two."

~~~~~

Mick goes to the vet with his goldfish. "I think it's got epilepsy", he tells the vet. Vet takes a look and says, "It seems calm enough to me". Mick says, "I haven't taken it out of the bowl yet".

~~~~~

Paddy spies a letter lying on his doormat. It says on the envelope: "DO NOT BEND".

Paddy spends the next 2 hours trying to figure out how to pick the bloody thing up.

~~~~~

Paddy was driving home, drunk as a skunk, suddenly he has to swerve to avoid a tree, then another, then another. A cop car pulls him over as he veers about all over the road. Paddy tells the cop about all the trees in the road.

Cop says "For God's sake Paddy, that's your air freshener swinging about!"

~~~~~

Reilly went to trial for armed robbery. The jury foreman came out and announced, 'Not guilty.'

'That's grand!' shouted Reilly. 'Does that mean I can keep the money?'

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An old Irish farmer's dog goes missing and he's inconsolable.

His wife says: "Why don't you put an ad in the paper?"

The farmer does. Two weeks later the dog is still missing.

"What did you put in the paper?" his wife asks.

"Here boy" he replies.

~~~~~

Paddy's in jail. The Guard looks in his cell and sees him hanging by his feet.

"What the hell you doing?" he asks.

"Hanging myself", Paddy replies.

"It should be around your neck", says the Guard.

"I know", says Paddy, "but I couldn't breathe."

~~~~~

An answer I can understand.....

An American tourist asks an Irishman: "Why do Scuba divers always fall backwards off their boats?"

To which the Irishman replies: "If they fell forwards, they'd still be in the bloody boat."

~~~~~

Murphy told Quinn that his wife was driving him to drink.

Quinn thinks he's very lucky because his own wife makes him walk.

~~~~~

Mrs. Feeney shouted from the kitchen, 'Is that you I hear spittin' in the vase on the mantle piece?'

'No,' said himself, 'but I'm gettin' closer all the time.'

~~~~~

Finnegin: My wife has a terrible habit of staying up 'til two o'clock in the morning. I can't break her out of it.

Keenan: What on earth is she doin' at that time?

Finnegin: Waitin' for me to come home.

~~~~~

**Slaney** phoned the maternity ward at the hospital. 'Quick!' he said. 'Send an ambulance, my wife is goin' to have a baby!'

'Tell me, is this her first baby?' the intern asked.

'No, this is her husband, Kevin, speakin'.'

~~~~~

Did you hear about the Irish newlyweds who sat up all night on their honeymoon waiting for their sexual relations to arrive?

~~~~~

My Mother wanted me to be a priest. Can you imagine giving up your sex life; and then once a week people come in to tell you the details and highlights of theirs?

<J>~<O>~<K>~<E>~<S>~<of>~<the>~<W>~<E>~<E>~<K>

From: "Mike Waldrip" [waldripk@gmail.com](mailto:waldripk@gmail.com)

**MONARCH PHOTO**

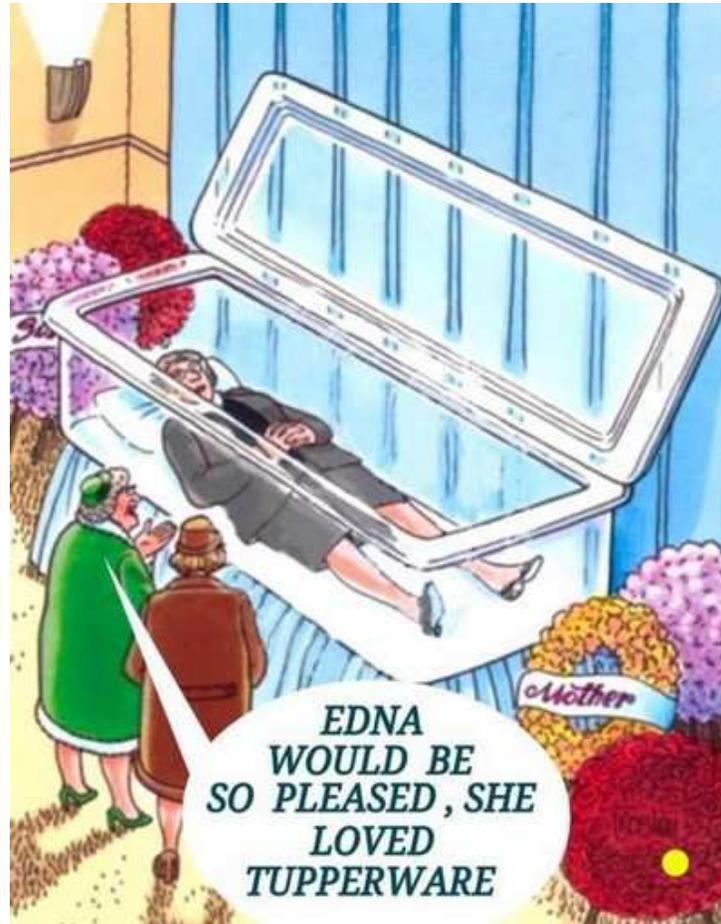


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From: "Douglas Dudash"

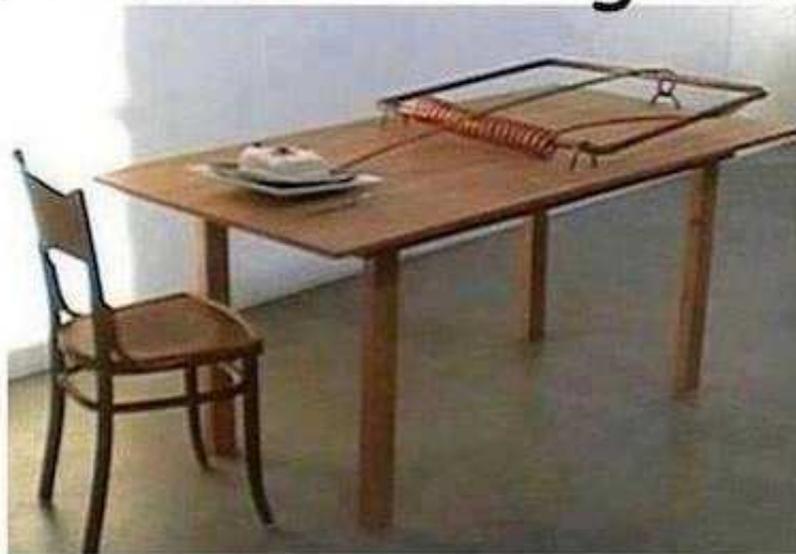


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## New Diet Program



<YOU>~<>~<JUST>~<>~<CAN'T>~<>~<MAKE>~<>~<THIS>~<>~<STUFF>~<>~<UP!>

**YOU JUST CAN'T MAKE THIS STUFF UP!**

From: "Tim Bolgeo" [tbolgeo@epbfi.com](mailto:tbolgeo@epbfi.com)

**HOUSTON BAKERS SHUT IN BY HARVEY BAKE HUNDREDS OF LOAVES OF BREAD FOR HUNGRY STORM VICTIMS**

by WARNER TODD HUSTON, 29 Aug 2017, Houston, TX

[http://www.breitbart.com/big-government/2017/08/29/houston-bakers-shut-in-by-harvey-bake-hundreds-of-loaves-of-bread-for-hungry-storm-victims/?utm\\_source=newsletter&utm\\_medium=email&utm\\_term=daily&utm\\_content=links&utm\\_campaign=20170829](http://www.breitbart.com/big-government/2017/08/29/houston-bakers-shut-in-by-harvey-bake-hundreds-of-loaves-of-bread-for-hungry-storm-victims/?utm_source=newsletter&utm_medium=email&utm_term=daily&utm_content=links&utm_campaign=20170829)



Facebook

**A group of Houston bakery employees stuck at work for two days due to flood waters in their area spent their time wisely by baking hundreds of loaves of pan dulce bread to ease the hunger of fellow victims, a report says.**

The owner and employees of El Bolillo Bakery in Houston shared a Facebook post to alert customers that the shop is closed due to the storm of the century. But, the post also notes that they haven't been idle, ABC's KSAT reported.

The owner of El Bolillo told friends that the bakery is "closed until further notice, but our bakers cooked all night long and we will be prepared to help as soon as we can with bread."

The bakers were apparently "stuck inside for two days, " but instead of doing nothing, they decided to do their part to aid their fellow Houstonians.

In another entry, the bakery workers posted a photo of the tray upon tray of bread baked for hurricane relief efforts.

The bakery's generosity has brought it a host of new fans with the posts about the bread being shared thousands of times.

WONDERFUL PEOPLE IN HOUSTON. UT

<?>~<YOU JUST CAN'T MAKE THIS STUFF UP!>~<?>

DELINGPOLE: SHIP OF FOOLS IV: ANOTHER GREEN ARCTIC EXPEDITION SCUPPERED BY ICE

by JAMES DELINGPOLE1 Sep 20171,079

<http://www.breitbart.com/big-government/2017/09/01/delingpole-ship-of-fools-iv-another-green-arctic-expedition-scuppered-by-ice/>

A sailing expedition to the North Pole to raise awareness of global warming has been forced to turn back, 590 nautical miles short of its destination, after the yachts found their passage blocked by large quantities of an unexpected frozen white substance.

According to Arctic Mission's website:

A meeting of the four skippers was held led by Erik de Jong, with Pen Hadow present, and it was agreed further northward progress would increase considerably the risks to the expedition, with very limited scientific reward. The decision to head south, back to an area of less concentrated sea ice in the vicinity of 79 degrees 30 minutes North, was made at 18.30 (Alaskan time).

Concentrated sea ice? In the Arctic Circle? Whoever would have imagined?

As usual, on these occasions, the expedition leaders are covering their embarrassment by billing their failure as a great success.

Arctic Mission has undertaken an extensive oceanographic, wildlife and ecosystem research programme during the voyage, led by Tim Gordon of the University of Exeter (UK). This has included work on acoustic ecology, copepod distributions and physiology, microplastic pollution surveying, inorganic carbon chemistry, seabird range expansion and microbial DNA sequencing. Scientific findings will be released following comprehensive data analysis and formal publication in peer-reviewed journals in 2018/19.



**Riccardo Bresciani/Pexels**

**It is believed Arctic Mission has sailed further north from the coastlines surrounding the Arctic Ocean than any vessel in history without icebreaker support.**

**Well maybe. But that wasn't the original point of the expedition when it was announced in the Sunday Times earlier this summer:**

**It is a polar record Pen Hadow wishes were impossible to achieve. The explorer, who was the first person to walk solo across the pack ice from Canada to the North Pole in 2003, will now try to highlight climate change by becoming the first to sail there in a yacht.**

**Hadow, 55, said it would be a bittersweet achievement to achieve the feat because it would mean that the polar ice cap had shrunk to record lows. "I'm very conflicted," he said. "If we do reach the North Pole by sail, I think the image would be iconic for the rest of the century and a call to action," he said. "If 50ft yachts can do this, imagine what commercial shipping can do."**

**This is not the first time Hadow has been denied the "bittersweet achievement" of pinning Arctic melt on "climate change." In 2009 – with encouragement from the Prince of Wales – Hadow led the Catlin Arctic Survey expedition which had to be cancelled less than half way into its 800 mile trek because the equipment broke in the freezing temperatures.**

His latest failure comes a year after yet another sailing expedition – this one called The Polar Ocean Challenge, led by veteran explorer David Hempleman-Adams – was also frustrated by unexpectedly large quantities of ice.

That was Ship of Fools II.

Ship of Fools I was, of course, the glorious December 2013 expedition to Antarctica – led by an Australian alarmist called Chris Turney, one of the correspondents in the Climategate scandal – which had to be called off after becoming stuck in ice which Turney insisted could not have been predicted.

Then earlier this summer, we learned of Ship of Fools III – a Canadian research expedition which had to be cancelled because, you guessed it, of “unprecedented” summer sea ice.

Why are these hapless fools such suckers for punishment?

Short answer: because that’s where the money is.

The Arctic is a mightily beautiful place to visit – as I once saw myself on a 300-mile trip on a skidoo round Svalbard – but it has been pretty well explored. So the only way these days you’re going to get sponsors to stump up for your icebergs ‘n’ polar bears jolly is if you can persuade them it’s all about “raising awareness” and “saving the planet.”

Rapacious corporations love to soften their image by having it associated with cuddly, caring green projects – especially if it accords with their business model. Insurance companies like Catlin – which sponsored Hadow’s previous expedition – for example have a strong vested interest in bigging up the climate threat because then they can persuade more clients to insure against the weather disasters which, supposedly, will become more likely as the planet heats up due to man’s selfishness, greed and refusal to amend his lifestyle...

The other problem, of course, is misreporting in the mainstream media which for years has been quoting “experts” assuring us of the Arctic ice’s imminent disappearance.

<YOU>~<>~<JUST>~<>~<CAN’T>~<>~<MAKE>~<>~<THIS>~<>~<STUFF>~<>~<UP!>

**YOU JUST CAN’T MAKE THIS STUFF UP!**

From: "Jim Woosley" [Jimwoosley@aol.com](mailto:Jimwoosley@aol.com)

**SOLAR MINIMUMS MAY BE FINAL PIECE OF PUZZLE IN FALL OF WESTERN CIVILISATION**

opinion July 29, 2017 01:00, By Sam Khour

<http://www.nationmultimedia.com/detail/opinion/30322133>

Special to The Nation

Academics often compare Western civilisation to the Roman Empire. This is hardly surprising when you consider that Amsterdam, London and Washington all compared themselves to Rome while constructing Romanesque government buildings and laws.

The period 500-100BC saw the ascension of that empire. The general population was overwhelmingly poor yet their loyalty and respect for the Roman Republic was high. Women were burdened with the job of creating and nurturing many children so they could go off to some far off place to be butchered for The Republic. These men trusted the civilian government that sent them to fight the Punic Wars against Carthage, whose fearsome commander Hannibal threatened Rome's very survival. The men who fought these tough battles were citizen-soldiers – like the draftees used by the United States other Western countries until the early 1970s. Our own Punic Wars – the two world wars and the conflicts in Korea and Vietnam – saw millions of poor and working class citizen-soldiers sacrifice themselves fighting a powerful enemy they believed threatened their very way of life.

By the 1st century BC, Rome was the most advanced and powerful civilisation on Earth and Romans' material wealth was skyrocketing. Men and women are increasingly less interested in marriage and no-fault divorce is enacted. Birth rates start to decline below the replacement rate. The citizen soldiers are eventually replaced with professional soldiers who expect compensation and are loyal to the military itself, not the state. As the empire expands in a series of wars of choice it becomes increasingly multicultural thanks to new citizens from conquered territories. Their loyalty is in question but Rome depends on them as mercenaries to defend the declining state. The government and the military industrial complex replace the private sector as the sole entity responsible for everyone's well-being. There is moral decay and brutality as Julius Caesar brags about killing one million Gauls. This period could be compared our own world since 1970. By the 400s Rome is being pillaged by Visigoths and Vandals, who ensure it never makes it to the 500s.

However there was something else occurring in the 400s that wasn't happening in the preceding centuries. Although corruption and immorality were rife, the scientific and historical record shows the climate cooled but, more destructively, it became erratic. Long dry conditions were interrupted by intense deluges. Unseasonal spells of cold weather became the norm. Although solar activity records only date back to the 1600s, these conditions were almost certainly the result of a combination of low solar activity and high volcanic activity – much like the post-medieval warm period that saw solar minimums like the so-called Maunder and Dalton and large volcanic eruptions like the Tambora which, combined with the Dalton, created freezing summers. The result during the 400s was rising food prices, which along with the other factors created deep social dissatisfaction as the economy faltered.

In today's world Western countries have recklessly created wars in Muslim lands only to accept millions of refugees. The argument has been made that these immigrants are necessary due to falling birth rates of the indigenous populations which leads to faltering economic growth. On the other hand developed countries like Japan, South Korea and Taiwan also have low birth rates but they don't create wars in the Middle East and don't accept massive influxes of refugees. The two issues seem to go hand in hand, like a new Rome invading territories, raising their civilisations to the ground, and acquiring both their skilled and non-skilled workers. In both the United States and Western Europe, the tension is building between recent immigrants and the indigenous population, punctuated by lone-wolf random attacks. The population in the US is increasingly suspicious of the

government as it raises the debt ceiling again and again to pay for entitlements, the military industrial complex and other government subsidised programmes that create employment. It has spent trillions in Middle Eastern wars which are now being fought by Kurdish and Arab mercenaries who expect to be paid \$1,000 a month while the Syrian government only pays its conscripts \$50 per month. Be that as it may, everything hums right along as cheap food and energy power a service-sector economy of affordable hotels and restaurants. Non-military manufacturing had moved to Asia by the 1980s.

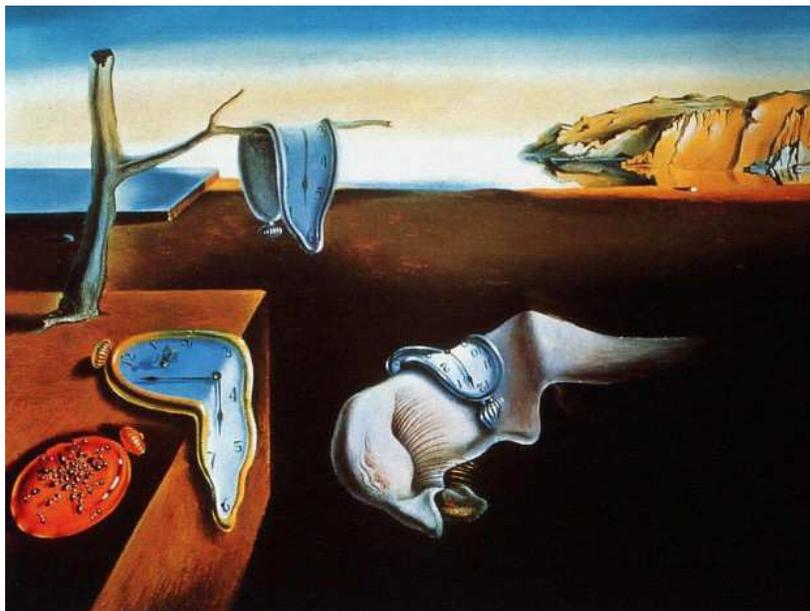
Enter the monkey in the wrench. After 200 years of healthy solar maximums, solar activity has been plummeting since 2010 and the first solar minimum will hit bottom around 2021. By the 2030s solar physicists now reckon that a grand solar minimum will consume most of the rest of the century. Volcanic activity has also been on the increase and more is expected as eruptions occur most often during solar cycle peaks or at solar minimums. In previous articles published in this newspaper I chronicled increasingly intense and erratic weather patterns that have coincided with the lower solar activity since 2010. The latest include a cold front that descended on the US Midwest in late June dropping temperatures to near freezing, and recent snowfall 200 kilometres south of Moscow in Tartarastran. Wheat futures immediately rose 6 per cent. At this time the world takes cheap foodstuffs for granted. A change of this reality in the future could shake the global world order to its foundations.

<?>~<YOU JUST CAN'T MAKE THIS STUFF UP!>~<?>

**WE ARE LIVING IN THE CRAZY YEARS AND FAHRENHEIT 451.**

Editor of the Fabius Maximus website Book, Film, & TV Reviews 3 September 2017  
<https://fabiusmaximus.com/2017/09/03/we-are-living-dystopia-of-heinlein-and-bradbury/>

Summary: We have entered the “Crazy Years”, as predicted long ago by science fiction author Robert Heinlein. Our lives are like scenes from Ray Bradbury’s Fahrenheit 451. These echoes from history help us break through the myopia of our daily routine to see how America has changed — and more clearly see where we are going.



“The Persistence of memory” by Salvador Dali (1931).

We’re in the crazy years

“The Crazy Years: Considerable technical advance during this period, accompanied by a gradual deterioration of mores, orientation, and social institutions, terminating in mass psychoses in the sixth decade, and the interregnum.”

— From Robert Heinlein’s timeline of his future history stories; first published

in Astounding Science Fiction, May 1940. This series was published as *The Past through Tomorrow*.

Crazy years are commonplace in human history. The 14th century were crazy years in Europe, brought about by massive social and political changes, plus natural catastrophes (e.g., megadeaths from plague and the onset of the Little Ice Age).

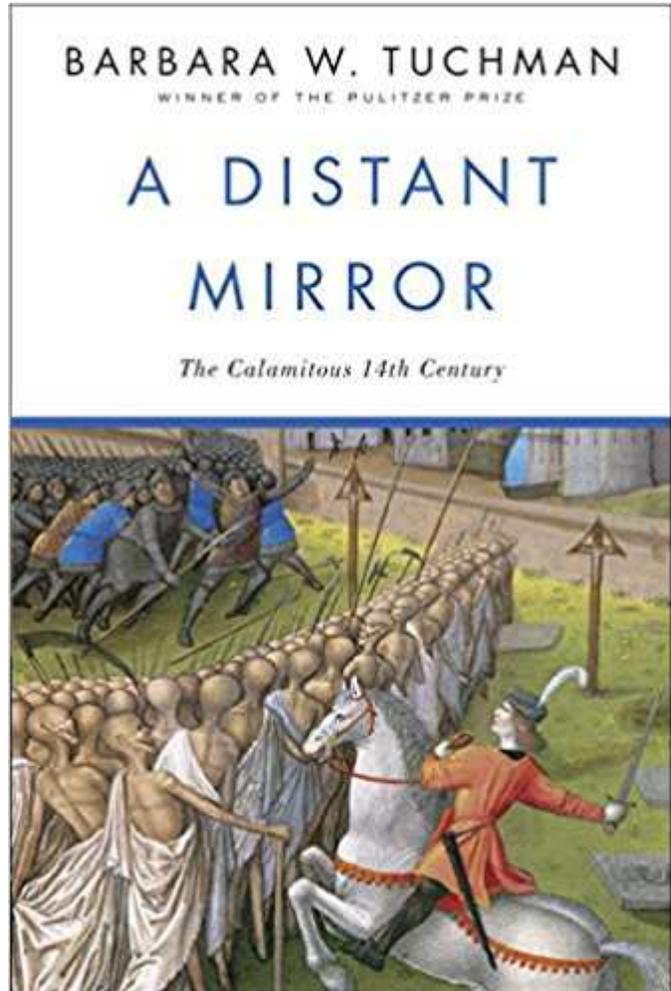
For a vivid account of this time see Barbara Tuchman's *A Distant Mirror: The Calamitous 14th Century* (1978). The French called the 1320s the *années folles* (crazy years), the aftershock of WWI and massive social and political change.

America has entered into the crazy years, just as Heinlein predicted (he got the century wrong: this might climax in the 2050s, not 1950s). Each day's headlines brings new evidence. For example, see how our politics has become a carnival, on both Left and Right.

Trump's clownishness and betrayal of populism offers the Left an opportunity to reverse their decades-long political decline. Instead of building a broad coalition, however, they focus on divisive issues of little interest to most Americans. They obsess about promoting the transgendered and tearing down monuments. They crusade in the name of science to prevent climate change, but largely abandon the IPCC — what they formerly described as the “gold standard of climate science” — for more extreme views held by a minority of scientists and often contradictory to the IPCC's views

(examples here, here, and here). They've ignited hysteria on America's campuses about identify politics (e.g., the racist banana peel outrage at the University of Mississippi).

The Right has built their own world and moved in. They created their own sciences: creationism, and calling climate science a fraud. They create their own history: the Civil War wasn't about slavery, amnesia about the horrors of the late 19thC (e.g., treatment of Native Americans, immigrants, unions), that we could have won in Vietnam, the horrible economy in the 1970s (& more here), and the Reagan economic miracle. The Right has its own economics: cutting taxes increases tax revenue, monetary stimulus produces inflation and stagflation, a strong currency is always good. My favorite trope on the Right is that “whites are the real victims of racism”, almost as daft as their other favorite “an armed society is a polite society.”



It's a frequent observation that so many headlines in the news read like those from The Onion or the Duffle Blog. That's power evidence that we are in the Crazy Years.

(2) More evidence: science fiction becomes daily news



Stories that we long read as allegories have become tales of simple fact. Such as Ray Bradbury's Fahrenheit 451 (1953 novel, 1966 film).

We prefer fiction to life.

In the novel, people watch their wide-screen TVs (which fill entire walls). One of the major characters is Mildred, an avid fan of the TV dramas.

{She experiences} "an electronic ocean of sound, of music and talk and music and talk coming in, coming in on the shore of her unsleeping mind. ...Every night the waves came in and bore her off on their great tides of sound ...There had been no night in the last two years that Mildred had not swum that sea, had not gladly gone down in it for the third time."

It has come to pass: Today, much of American is enthralled by TV dramas, engrossed in them like no previous generation. Serious websites, such as Slate, have daily articles discussing TV shows — with news and analysis about fictional events

indistinguishable from those about real events. That plus the growth in our other use of screen-based media (games, internet) means that we looking at these images for incredible amounts of time — and watching more each year (see the NYT for numbers).

This is easily seen on America's streets, with people walking down the street oblivious to everything around them — their attention on their phones.

We increasingly find the shadow world much more interesting than the real one — and the people around us. See Robert D. Putnam's "The Strange Disappearance of Civic America" in The American Prospect, Winter 1996). Also see his 2001 book, Bowling Alone: The Collapse and Revival of American Community.

The war on our history.

WaPo: Protesters pull down Confederate statue in Durham, N.C. on 14 August 2017.

Also very 451 is the Left's war on historical monuments, seeking to sanitize America from hurtful memories (as if Americans were not already quite ignorant about their past). Bradbury describes how literature, to use the current jargon, "triggers" people. The protagonist reads poetry to three women. One breaks into tears. A second lashes out at his behavior.

“Mrs. Bowles stood up and glared at Montag. ‘You see? I knew it, that’s what I wanted to prove! I knew it would happen! I’ve always said, poetry and tears, poetry and suicide and crying and awful feelings, poetry and sickness; all that mush! Now I’ve had it proved to me. You’re nasty, Mr. Montag, you’re nasty!’

“Silly words, silly words, silly awful hurting words. Why do people want to hurt people? Not enough hurt in the world, you got to tease people with stuff like that.”

In 451 books were burned to avoid the distress they caused people. Today we have people tearing down statues and suppressing speech for the same reason. We are in the early stages of this process. Watch this fire grow. There are no obvious limits to this process, unless we stop it.

“Theater cancels *Gone With the Wind* screening: Film ‘insensitive’  
“The Orpheum Theatre received ‘numerous comments’ from patrons.”

<http://ew.com/movies/2017/08/26/gone-with-the-wind-theater-canceled-screening/>

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From: “Tim Bolgeo” [tbolgeo@epbfi.com](mailto:tbolgeo@epbfi.com)

## LITHIUM-ION BATTERY REALITIES AND CONCERNS

Lithium-ion battery technology has progressed a lot over the past half decade and they are now deemed safe for aerospace use, which should please travelers and aircraft manufacturers, alike.

Ben Hargreaves | Aug 09, 2017

[http://www.mro-network.com/technology/lithium-ion-battery-realities-and-concerns?NL=AW-022&Issue=AW-022\\_20170830\\_AW-022\\_922&sfvc4enews=42&cl=article\\_9&utm\\_rid=CPEN1000001477803&utm\\_campaign=11489&utm\\_medium=email&elq2=465b4a80f0084d6394c089ccf4a87af8](http://www.mro-network.com/technology/lithium-ion-battery-realities-and-concerns?NL=AW-022&Issue=AW-022_20170830_AW-022_922&sfvc4enews=42&cl=article_9&utm_rid=CPEN1000001477803&utm_campaign=11489&utm_medium=email&elq2=465b4a80f0084d6394c089ccf4a87af8)

Lithium-ion batteries are on the move. Popular for many years in consumer electronics, these battery packs, notable for high energy density, low rates of self-discharge and low levels of maintenance, are increasingly used in electric vehicles, military applications, and aviation and aerospace design. Jean-Marc Thevenoud, marketing manager at French battery designer and manufacturer Saft, says it will take time for lithium-ion technology to make serious inroads into aerospace:

“For any new technology on the market, it is in a learning phase. But step-by-step, people are using more and more lithium ion because of weight-saving and maintenance advantages.”

In fact, there have been widespread concerns over the safety of lithium-ion batteries when used in aircraft systems—or even when lithium-based batteries are transported by aircraft. UPS Airlines Flight 6, a cargo flight operated by UPS Airlines flying between Dubai and Cologne, Germany, crashed following an inflight fire in September 2010, killing its two crew. The fire was subsequently found to have begun in the contents of a cargo pallet containing

more than 81,000 nonrechargeable lithium batteries—leading the FAA to issue restrictions on carrying them in bulk on passenger flights.

Then, over the course of a year of the newly launched Boeing 787's operation (2013-14), a series of incidents occurred highlighting problems with lithium-ion batteries used in the new aircraft's systems. They began with a fire that started in a battery that overheated in an empty 787 operated by Japan Airways (JAL) at Boston's Logan Airport in January 2013, followed a few days later by a battery malfunction onboard an All Nippon Airways (ANA) 787 that forced the aircraft into an emergency landing.

A year later, in January 2014, a JAL maintenance crew at Tokyo's Narita International Airport discovered smoke coming from the main battery of a new 787. This was soon followed by another incident, in which a lithium-ion battery onboard another JAL 787 emitted smoke and partially melted while the aircraft was undergoing maintenance.

The initial 787 incidents prompted ANA and JAL to ground their fleets in early 2013. The FAA soon ordered all U.S. operators to ground their 787s while an investigation took place; other airlines and countries opted to as well. The aircraft returned to the skies a few months later, but the reputation of Boeing—and lithium-ion batteries as a technology—had been dealt a blow.

## **STANDARDS AND IMPROVEMENTS**

Indeed, aviation regulators have tightened the rules around the use and transport of lithium-ion batteries in recent years. But high energy density and low weight will continue to make them attractive to aircraft manufacturers trying cut fuel consumption. And a much lower rate of self-discharge than other rechargeable cells will no doubt see the batteries continue to be developed for aviation applications. But the International Civil Aviation Organization (ICAO) amended its rules on carrying lithium-ion batteries in the holds of passenger aircraft following the 787 incidents. ICAO is also now pursuing new guidelines around the transport of lithium-ion batteries within the cabin—such as in consumer electronics devices—as well as in the holds, says Anthony Philbin, ICAO communications chief.

The European Aviation Safety Agency (EASA) says that “lithium-ion batteries in general are significantly more susceptible to internal failures” such as overcharging and over-discharging, and that some feature flammable electrolytes. EASA issued a Certification Review in 2011 with strictures on maintaining safe lithium-ion cell temperatures and pressures, as well as ensuring that batteries were subject to flammable-fluid protection rules. It also requires that they incorporate fail-safe systems with the means to automatically disconnect the battery from its charging source in the event of failure and include monitoring and warning systems that would alert crew if batteries fall below the charge level necessary to power aircraft systems.

“For large aircraft, standards are currently being discussed with experts and standardization bodies, such as the RTCA, for different sizes of lithium-ion batteries,” explains Dominique Fouda, EASA head of communication and quality.



**Saft produces lithium-ion batteries for aircraft at an assembly line in Bordeaux, France.**

**Air France Industries-KLM Engineering and Maintenance (AFI-KLM E&M) maintains various aircraft battery systems. Robert van Kesteren, manager of avionics engineering, says that “special challenges are related to the type of battery used on the aircraft. The new lithium-ion batteries represent different challenges than traditional nickel-cadmium (NiCad)**

**batteries.” AFI-KLM E&M services 787 lithium-ion batteries as well as other types of battery systems.**

Van Kesteren says battery vendor Thales has improved the 787 lithium-ion battery in a number of ways. “The previous model is no longer used. Also, Boeing has improved the 787 battery installation—and maintenance and operational procedures,” he notes. The component maintenance manual for overhauling 787 lithium-ion batteries has been updated to reflect modifications made to the 787 lithium-ion battery design, which include a sealed steel box around the battery and improved separation between battery cells. Boeing has introduced ceramic-plated spacers between them to cut risk of heat propagation, for example.

The AFI-KLM E&M shop in Amsterdam includes capabilities to service the lithium-ion battery used for the 787 main battery and auxiliary power unit (APU). On the 787, the batteries also are used for the flight data recorder remote independent power supply, wireless emergency lighting system, flight control electronics and emergency locator beacon. AFI-KLM is currently outsourcing repair of these other battery systems while it develops in-house capabilities to service them. “The batteries do not enter the shop very frequently—yet,” says Van Kesteren. He cites one incident in which a lithium-ion battery failed due to overdischarge—requiring complete replacement of the battery cell package.

## **SAFETY IMPLEMENTATION**

Leaving their inflight use aside, storage and transportation of lithium-ion batteries continues to pose challenges. For example, 787 lithium-ion batteries are stored in a charged state because undercharged batteries pose a risk. This means they are charged at either 25% for regular storage, or at 100% for mission-ready batteries, which require specific checks on voltage and capacity to be carried out at a 6-12-month frequency. Regulations from the International Air Transport Association prohibit the shipping of failed lithium-ion batteries and cells by air. “This means that the battery is transported by truck when possible,” Van Kesteren says.



**AFI KLM-E&M**

**Air France Industries-KLM Engineering and Maintenance carries out repairs to lithium-ion battery systems for the Boeing 787.**

**French battery-maker Saft says concerns over lithium-ion batteries should be allayed as further advances are made with cell technology. Saft has worked on lithium-ion systems for aerospace for 15 years and provides lithium-ion batteries for the F-35 Joint Strike Fighter, which features two Saft batteries. It has also been providing lithium-ion battery technologies for the Airbus A350 for 1.5 years. On the A350, Saft batteries are used to start the APU. They also provide the minimum level of back-up energy in an emergency. If there is an engine flame-out or loss of main electrical power, the batteries can supply vital functions such as avionics and radio to the network.**

**There is a long list of requirements that Saft batteries must fulfill to meet the demands of an OEM—including fire testing, liability and electrical testing. There is also a complex regime with many hundreds of testing cycles. “There is a lot of testing to be done to ensure we comply with requirements,” says Thevenoud. The company works closely with OEMs to develop new batteries to OEM specifications, and also helps the OEM develop those specifications, he says: “We design the best battery through a process of collaboration . . . because we know we will work with the OEM over the lifetime of the aircraft, which will be at least 20 years. It is a long-term partnership.”**

**Developing batteries with enhanced characteristics for maintenance is one aim. Saft already has refined a range of NiCad ultra-low-maintenance (ULM) aviation batteries featuring plastic-bonded technology and reduced water consumption, which increases the battery’s flight duration between maintenance stops. This Saft ULM battery may increase time between maintenance stops by more than 50%, the company contends. On the Airbus A330, Saft batteries have seen maintenance intervals of 1,000 operating hours rise to 3,000. This has significantly reduced operating costs. The lifetime of the battery is also longer, reducing total cost of ownership.**

**On the A350, the four lithium-ion batteries save the weight of one passenger: 80 kg (176 lb.). “This is very significant for an aircraft,” says Thevenoud. The second advantage is an improved maintenance interval for lithium-ion, which is increased to two years. This compares to 3-6 months for a NiCad battery. Changes to batteries also can be made “on-wing” using Saft ground support equipment. Batteries can be tested while on the aircraft, speeding up maintenance checks and cutting time and cost for aircraft operators.**

**Air France-KLM E&M says it is developing capabilities to maintain the lithium-ion batteries on the A350.**

**Thevenoud says the battery system developed by Saft for the A350 is the first lithium-ion battery in the world that is compliant to Design Assurance Level (DLA) A, the highest achievable DLA on an aircraft. He concludes: “People should not worry about lithium ion. If the chemistry is well-controlled and the company making the batteries controls the process correctly, it is fine.**

**“We have been working with Airbus for a long time to make sure the batteries are safe.”**

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## 12,000 TONS OF ORANGE PEELS BRING A JUNGLE BACK TO LIFE

By Nathaniel Scharping | August 30, 2017 3:48 pm

<http://blogs.discovermagazine.com/d-brief/2017/08/30/orange-peels-jungle/#.WamS2sh95PY>



(Credit: Horia Bogdan/Shutterstock)

Twenty years ago, a pasture in Costa Rica was nearly barren farmland, choked by invasive grasses. Today, it blooms anew with a rich tangle of jungle plants. The magic ingredient for this resurgence? Oranges.

In the mid-1990s, Del Oro, a newly established orange juice manufacturer in Costa Rica was looking for a way to get rid of the rinds and

pulp left over after juice extraction. They planned on building an expensive processing plant, but two ecologists from the University of Pennsylvania approached them with a different idea. If the company would donate some land it owned adjacent to a national forest they could dump their organic waste on degraded areas nearby. A pilot program yielded rich black loam and a diversity of new plants, and in 1998, the company unloaded 12,000 metric tons of orange waste onto the forest.

### ORANGE YOU HAPPY?

The promising program would be cut short, however, by a lawsuit filed by a rival juice company, which eventually shut down the composting project on the grounds that it was defiling a national park. Today, that “defiled” land is a verdant patch of jungle standing in stark contrast to the sparse pastures it lies next to. A new study from researchers at Princeton and the University of Pennsylvania analyzed the health and composition of the small area and found a nearly 200 percent increase in woody biomass and three times as many species as a control area next door.

At one time a field for grazing, the area was initially overrun with African pasture grasses, leaving little room for native plants. Once spread with orange rinds, however, the grasses were smothered and the loamy, nutrient-rich soil that the rinds produced provided fertile ground for native plants to take hold. The pressed oranges were actually perfect for the task because they had been leached of essential oils and acids, which would normally harm plant life.

Instead, the orange treatment injected essential nutrients like potassium, nitrogen and, especially, phosphorus — which they found little of in the soil, indicating it had all been used up — into the soil. Aside from the initial disposal, the researchers didn’t intervene in the area — the rest was all Mother Nature.

## EXPERIMENT BEARS FRUIT

Soil samples, published last month in the journal *Restoration Ecology*, yielded significantly elevated nutrient levels, which persisted even as late as 2014, when the last round of sampling took place. There were 24 species of tree in the treated area, compared to eight in the control, and the composition of species was much more balanced. The shade cover was more complete, and the researchers say that they didn't even begin to count things like woody shrubs, vines and other smaller species. In short, it looked like a jungle again.

“In the area surrounding where the orange peels were deposited, the few trees that we found were almost all just two species of pasture-associated trees that are not typically found in the mature forests of that part of Costa Rica,” says co-lead author Tim Treuer, an ecology PhD student at Princeton. “In the fertilized area there was a much greater diversity of trees, including many species that are typically only seen in older forests. Not only did the orange peels jumpstart the return of forest, but they've already triggered the return of a rapidly maturing forest.”

While the application of agricultural waste to denuded jungle lands is essentially a win-win situation for all involved, it may not always produce such amazing results. It worked here because the orange peels were able to effectively block out an invasive species and produce thick loam for new growth. In other environments, simply dumping organic waste may not provide the kind of blank slate it did here. In addition, Costa Rica is warm and humid year-round — similar tactics might not be as effective in places where it's below freezing part of the year.

Still, the project didn't produce any of the pollutants or pests detractors worried it might, and the results are clearly visible. There are unfortunately no plans to continue the project at the moment, Heuer says, a result he blames on the decades-old lawsuit. There is a similar experiment in the country involving coffee cherries, he says, though it doesn't seem to have produced any results yet.

Oranges, it seems, are part of an essential diet for more than just humans.

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## 'MAJOR PUCKER FACTOR': WILL SPACEX'S FALCON HEAVY ACE ITS MAIDEN LAUNCH?

By Leonard David, Space.com's Space Insider Columnist | September 1, 2017 08:26am ET  
<https://www.space.com/38016-spacex-falcon-heavy-rocket-maiden-launch-success-chances.html>

SpaceX says its Falcon Heavy, which is slated to make its maiden launch in November from the historic Pad 39A at NASA's Kennedy Space Center (KSC) in Florida, will be the world's most powerful operational rocket.

No matter how you look at it, the reusable Falcon Heavy is a big deal. Its first stage is composed of three Falcon 9 nine-engine cores, adding up to a total of 27 Merlin engines that will generate 5 million lbs. of thrust at liftoff.

The mega-lifter was designed from the outset to propel humans into space, and it could eventually fly missions with crew to the moon and Mars. But the first flight may not go so well, according to SpaceX founder and CEO Elon Musk.

"There's a lot that could go wrong there. I encourage people to come down to the Cape to see the first Falcon Heavy mission; it's guaranteed to be exciting," Musk said in July at the 2017 International Space Station Research and Development conference in Washington, D.C. (The "Cape" is Cape Canaveral, where KSC is located.)

"There's a lot of risk associated with the Falcon Heavy ... a real good chance that [the] vehicle does not make it to orbit," he added. "I want to make sure to set expectations accordingly."



SpaceX's chief rocketeer, Elon Musk, has big plans for the big Falcon Heavy. Credit: Image courtesy of Trevor Mahlmann/CASIS

### **27 engines**

Musk mentioned several specific reasons why the Falcon Heavy's maiden flight may not go perfectly. One is the need for all 27 orbit-class first-stage engines to light at the right time. Another is the stress that the first stage's central "core" will experience during liftoff; the loads on the rocket, from aerodynamic forces to vibration and acoustic issues, will be quite high, he said.

"I hope it makes it far enough away from the pad that it doesn't cause pad damage," Musk said. "I would consider even that a win, to be honest. Yeah, major pucker factor, really; that's, like, the only way to describe it."

Musk stressed that he believes the Falcon Heavy will be a great vehicle, but he added that there may be some kinks to work out, especially given how challenging the rocket's development has been.

"It just ended up being really way, way more difficult than we originally thought," Musk said. "We were pretty naive about that."



An artist's illustration of the Falcon Heavy on Pad 39A at NASA's Kennedy Space Center in Florida. Credit: SpaceX

### **SYNCHRONIZED AND STABILIZED**

Musk's caution about the success of the maiden flight is justified, said Jim Cantrell, CEO and co-founder of Vector, a microsatellite space launch company based in Tucson, Arizona.

Cantrell has a history with SpaceX; he played a fundamental role in founding the company and served as its first vice president of business development.

Igniting a cluster of Falcon Heavy engines at the right time is a challenge, with the motors needing to be synchronized and stabilized, Cantrell said.

"It may look instantaneous to the eye, but in reality, you've got this wave of ignitions that are happening," Cantrell said. "The ignitions start inside the engines and not outside, and it's still a wave of flame fronts racing towards the rocket nozzle exit. If one engine doesn't ignite internally as it should, you will get a flame front that travels back into the engine."

"That creates a pressure spike, and that can cause what we call 'rapid unscheduled destruction' — and that's bad," Cantrell said.

Furthermore, the large number of Falcon Heavy engines requires a great deal of plumbing, Cantrell said. Opening and closing engine valves causes engine vibrations, as does the movement of fluid through the pipes.

"They all can resonate together," Cantrell said. "So Elon is worried about all the right things. It's an enormous issue that's worthy of going well out of your way to try and avoid."

"I don't think it's out of anybody's belief that Falcon Heavy will be successful. Nor will it be shocking if it's a failure," Cantrell said of the first flight. "I would see success being a reflection of a system engineering maturity at SpaceX and a sign that the company is starting to regularize their operations, which takes time to do."



The 27 Merlin engines that power the Falcon Heavy's three cores are arranged in an "Octaweb" configuration. Credit: SpaceX

### LINED-UP CORES

Rand Simberg is a consultant in space business and technology, and a self-described "recovering aerospace engineer" based in Jackson Hole, Wyoming. He's also the author of the book "Safe Is Not an Option: Overcoming the Futile Obsession with Getting Everyone Back Alive That Is Killing Our Expansion into Space" (Interglobal Media LLC, 2013).

Like Cantrell, Simberg said the number of engines on the Falcon Heavy could be an issue.

"First, we know from its track record that having nine engines close together isn't a problem for Falcon 9," he told Space.com. "But while they've probably attempted to simulate it, SpaceX cannot fully understand the interaction of three times as many engines on three lined-up cores until they actually fire them all at once ... and won't know for sure until the first time they do so when it's on the pad this fall. That may be what has Elon concerned about potential pad damage."

Simberg also identified another possible issue: schedule reliability.

"SpaceX has aborted launches of the Falcon 9 when one or more of the engines was indicating performance issues on ignition," he said. "Three times as many engines means a lot higher probability of having an issue with one of them."



**Booster basics: The Falcon Heavy's Octaweb clustering of Merlin engines. Credit: SpaceX**

#### **REASON FOR OPTIMISM**

But such potential pitfalls don't doom the first flight to failure, experts stressed.

"I'd give the Falcon Heavy a high probability of working" on the first try, said Marshall Kaplan, chief technology officer for Launchspace in Bethesda, Maryland. He has participated in several launch-vehicle and satellite developments and has served as chief engineer on two launch-vehicle programs.

Although the Falcon Heavy is complicated, each of its engines is fairly inexpensive compared to a Saturn V F-1 or a space shuttle main engine, Kaplan said. Musk has "figured out a way to economically put these relatively cheap engines together and make the whole thing a little more cost-effective," he added.

There is still uncertainty about the loads the rocket will experience, Kaplan said. "But frankly, based on his previous success, I would expect it to work," he said.

With the first few flights of any new launcher, "you are going to instrument the rocket up and down with sensors and have a lot of telemetry channels down to the ground," Kaplan

noted. "You want to know everything from stress, to temperatures and voltages, propellant flow — and also have all the guidance and navigation information coming down. So if something goes wrong, you'll know why."

Once the Falcon Heavy gets up and running, it will be a competitor on the world stage of big boosters, which include United Launch Alliance's Delta IV and Atlas V, as well as Europe's Ariane 5, and the larger family of Russian and Chinese boosters, Kaplan said, adding that Musk is "already an established competitor."

"Musk's ultimate goal is Mars," Kaplan added. "So a lot of what he's doing is pointed in that direction, so to speak. Falcon Heavy is a building block towards Mars."



The Falcon Heavy was designed to be reusable. Both the center core and the side boosters carry landing legs, which will land each core on Earth after takeoff. Credit: SpaceX

#### FUELING A REVOLUTION?

"It's a new stage in the spaceflight revolution that Elon has kicked off," Simberg said. Getting Falcon Heavy online would (at least ultimately) lead to another drop in launch prices, he added.

"They [SpaceX] will continue to charge whatever the market will bear as long as they can, and pocket the difference in profit," Simberg said. But the marginal operating costs of a vehicle that can toss many tens of thousands of pounds of payload into orbit — while fully recovering and reusing most of the hardware — "will eventually allow huge reductions in price to the launch customers as well, particularly when they're pressured by competition from Blue Origin's New

Glenn and others," he said.

It could start to finally approach the magical number of \$100 per pound to orbit, Simberg said. "Since the dawn of the space age 60 years ago this fall, the biggest barrier to progress in space has been the high price of launch."

There's another fallout factor from an operational Falcon Heavy, Simberg said. "The political viability of NASA's Space Launch System — that will cost literally billions of dollars per flight once every year or two — will become increasingly untenable," he concluded.

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## **ETHANOL: A LETHAL INJECTION FOR TUMORS**

By Alex Berezow — September 3, 2017

<https://www.acsh.org/news/2017/09/02/ethanol-lethal-injection-tumors-11779>

In the rich world, cancer therapy is expensive. In the developing world, it may not be available at all. Not only is cutting-edge technology in short supply, but so are things like electricity and medical personnel. The lack of necessary resources for basic healthcare is made obvious by the fact that, if diagnosed with cancer, a person in the developing world is more likely to die from it than a person in the developed world.

To help alleviate this problem, cheap, uncomplicated, portable, and preferably non-surgical treatments that do not require electricity are needed. Now, a team of researchers from Duke University has shown that injecting an ethanol-based gel directly into a specific type of tumor, called squamous cell carcinoma, resulted in a 100% cure rate in a hamster model.

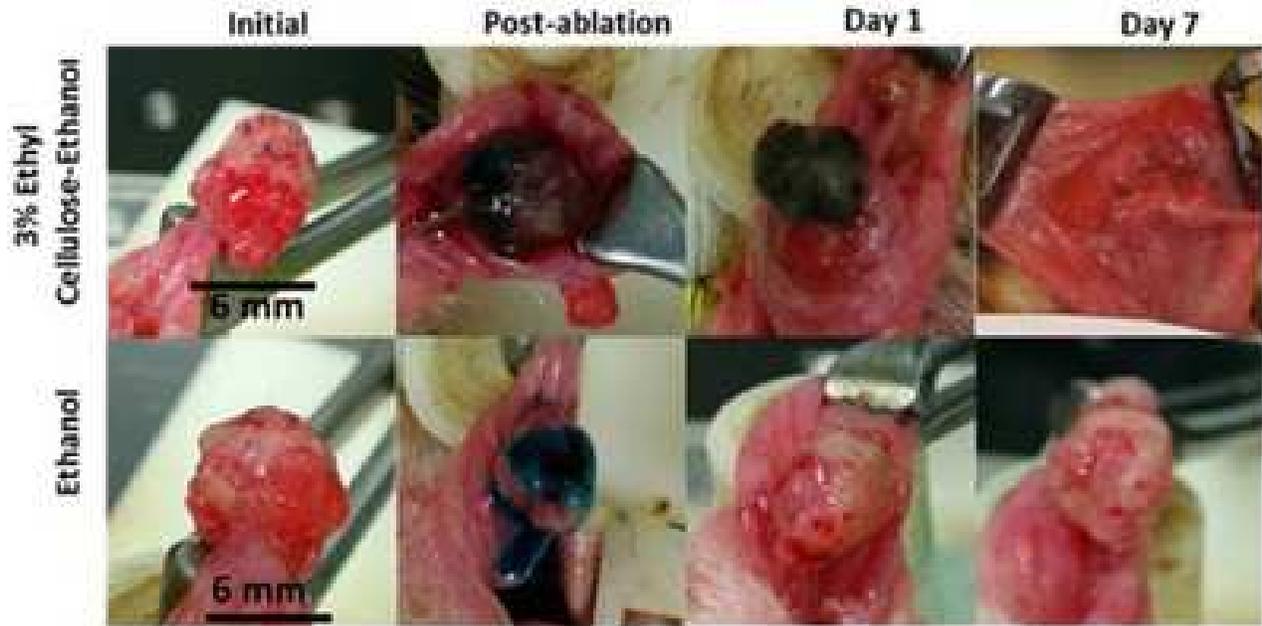
The authors were already aware of a therapy known as ethanol ablation. If ethanol (the type of alcohol found in your favorite adult beverages) is injected into a tumor, it destroys proteins and causes the cells to dehydrate and die. Ethanol ablation is used to treat one type of liver cancer, and its success rate is similar to that of surgery. Better yet, it costs less than \$5 per treatment.

Ethanol ablation faces several limitations. First, it only works well for tumors that are surrounded by a fibrous capsule. Second, it requires large amounts of ethanol, which can damage nearby tissue as it leaks out. And third, it requires multiple treatments.

To overcome these hurdles, the authors mixed ethanol with ethyl cellulose, creating a solution that when injected into the watery environment of a tumor turns into a gel, which remains close to the injection site. After they practiced injecting their solution into imitation tumors (what they called "mechanical phantoms"), the authors turned to a hamster model.

The team induced the formation of oral cancer (specifically, squamous cell carcinoma) in hamster cheek pouches by rubbing them with a carcinogen called DMBA. After about 22 weeks, tumors (without capsules) formed.

In the control group, tumors were injected with pure ethanol. The results were not good. After seven days, 0 of 5 tumors regressed completely. (Tumors injected with a large amount of ethanol -- four times the volume of the original tumor -- performed better: 4 of 12 regressed completely.) The results for the ethanol gel were far superior. After seven days, 6 of 7 tumors regressed completely. (By the eighth day, all 7 tumors were gone, for a cure rate of 100%.)



As merely a proof-of-concept in an animal model with small sample sizes, obviously more work needs to be done. Still, the results are incredibly promising. The team's findings suggest that merely a single injection of their special ethanol-based gel may be sufficient to cure certain types of tumors. They believe their technique may be applicable to some breast cancers and cervical precancerous lesions.

Furthermore, any technological advances that result from the team's research will have applicability not only to the developing world but to the developed one, as well.

Source: Robert Morhard, et al. "Development of enhanced ethanol ablation as an alternative to surgery in treatment of superficial solid tumors." Scientific Reports 7, Article number: 8750. Published: 18-Aug-2017. doi: 10.1038/s41598-017-09371-2

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## ROYAL NAVY TEST FIRES SUPERSONIC INTERCEPTOR MISSILE

[David Szond, September 4, 2017](#)

<http://newatlas.com/royal-navy-test-sea-ceptor/51185/>

The Royal Navy has showed off its latest missile in the first successful test of the Sea Ceptor air defence system. Britain's Defence Minister Harriett Baldwin announced that the live-fire test of the supersonic missile, which is designed to intercept and destroy enemy missiles at three times the speed of sound and will be a key system for protecting Britain's nuclear deterrent and [aircraft carriers](#), took place off the coast of Scotland from the Type 23 frigate HMS Argyll.

Today's announcement came as the Minister was visiting MBDA, the builder of the Sea Ceptor, at the company's facility at Filton, near Bristol. Sea Ceptor is the maritime variant of

**MBDA's next-generation Common Anti-air Modular Missile (CAMP), which is intended as an all-service missile for the Royal Navy, Royal Air Force, and the British Army.**



**Sea Ceptor is intended to intercept air targets at Mach 3(Credit: Ministry of Defence)**



**The firing tests were conducted from HMS Argyll(Credit: Ministry of Defence)**

CAMM's modular design allows it to be adapted to each service's needs while keeping down costs. The Sea Ceptor Navy variant will replace the current Sea Wolf missiles, while the Land Ceptor Army variant will replace the Rapier. Meanwhile, an Air Force variant will replace the RAF's stock of ASRAAM missiles. Sea Ceptor will be retrofitted to the Type 23 frigates and will be standard issue on the new Type 26 frigates currently being built.

According to the Navy, the Sea Ceptor is a considerable improvement on the old Sea Wolf, with six times the range of the latter to cover an area of 500 mi<sup>2</sup> (1,300 km<sup>2</sup>). Weighing in at 218 lb (99 kg), having a length of 10 ft (3.2 m), and diameter of 6.5 in (166 mm), it is much more compact than the Sea Wolf and has an operational speed of Mach 3 (2,283 mph, 3,675 km/h). In addition, its improved radar and datalink technology allows it to engage with multiple targets to fend off saturation attacks by missiles, fast jets, helicopters, and drones intended to overwhelm the ship's defenses.

The Ministry of Defence (MoD) says that HMS Argyll will continue to conduct firing trials of Sea Ceptor before deploying to Japan in 2018.

"The firings are an important step forward in proving the significant improvements over previous air defence systems and further evidence of our commitment to provide the very best equipment to our armed forces," says Tony Douglas, Chief Executive Officer for the MoD's procurement organisation Defence Equipment and Support.

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**ABSOLUTELY & TOTALLY POLITICALLY INCORRECT & AS FAR TO THE CENTER AS YOU CAN GO!**

From: "Jim Woosley" [Jimwoosley@aol.com](mailto:Jimwoosley@aol.com)



*The September 6th, 2017, Edition of THE REVENGE HUMP DAY!*

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*At first I thought to put this one in the jokes section. But it relayed a message that I thought a lot of you out there should think about. UT*

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