

Aviation Exploring Post 107

Aerospace Education And
Youth Development

Somerset Air Service, Inc.
SMQ



FLIGHT LOG JULY 2008

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Aviation Exploring is “Learning for Life sponsored by:
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Somerset Airport @ George Walker Field
“A Field of Dreams”

P.O. Pox 1007, Bedminster, NJ 07921
908 722 2444 / info@somersetairport.com /

Aviation Exploring Post 107 has taken off and is on an exciting journey in aerospace. Our journey is documented in our [AEP107 FLIGHT LOGS](#). Our experiences, activities, member information are recorded and published to our membership, alumni, recruits, partners and friends of AEP107, on a monthly basis. The AEP107 Flight Logs are also posted on our website: www.aep107.org. Please send all FLIGHT LOG information / updates to: tfteel@optonline.net.

YOUTH PROTECTION NOTES: The AEP107 Flight Log does not publish the last names of Aviation Explorers ages 17 and under. The AEP107 Flight Logs are distributed individually via Bcc:

UP AND COMING EVENTS [Return to Contents](#)

NEW JERSEY AVIATION RELATED EVENTS

(NOTE: The full calendar has been shortened to fit in our newsletter and shows only New Jersey Events. For a complete calendar refer to the note below. Tom Teel)

Updated 06/01/08

DATE	EVENT	CONTACT
Aug 20	Atlantic City , NJ Thunder over the Boardwalk	www.atlanticcitychamber.com
Sept 19	Lumberton, NJ Family night at Air Victory Museum South Jersey Regional	(609) 267-4488
Sept 20 – 21	Teterboro , NJ Wings and Wheels NJ Aviation Hall of Fame and Museum	(201) 288-6344
Sept 20 – 21	NJ Wheels and Warbirds Air Show, Millville Airport	www.millvilleairshow.com
Sept 21	Bedminster, NJ MAAC Annual Meeting /Fly In Walker Field (SMQ)	(973) 377-8945
Nov 8	Millville, NJ Veterans Appreciation Day MAAF Museum Millville Airport Reenactors, Warbirds, Food, etc	(856) 327-2347

This calendar is a service of New Jersey Aviation Education Council (NJAE) www.njaviation.gov
The information is not guaranteed. It is wise to confirm dates as some events are canceled without notice.

Please send all event information by the 14th of each month to either of the two addresses listed below.

If you would like to receive a full calendar of events by e-mail, please e-mail Aeromary@gmail.com

Thank you.

Diana Dade and
1430 Maple Ave
Hillside, NJ 07205
(973) 923-1795

Mary Sullivan
103 Mountain View Road
Warren, NJ 07059
(908) 647-6606

(Friends of AEP107)

EAA CHAPTER CALANDER OF EVENTS = In a 250 mile radius from SMQ

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http://www.eaa.org/calendar/eventlist.aspx?SearchState=&SearchCountry=&Zip_Code=&Miles=250&MilesType=M&AirportID=smq&EventType=&EventTitle=&StartDate=&EndDate=

MAPA

For More Information on MAPA, Contact: David Simpson, MAPA Program Chairman on 973-635-9770 or dsimpso@optonline.net or visit <http://www.midatlanticpilots.com>

➔ **AUGUST 27 28, Cape May Airport, Naval Air Station Wildwood Aviation Museum**

<http://www.usnasw.org>

<http://www.collingsfoundation.org/menu.htm>

The Collings Foundation, is bringing a B-17, B-24, and a B-25 to the annual Airfest. The FAA will have an exhibit plus two of our aircraft on static display at this event

(Submitted by: Mary Lou Dordan, Aviation & Space Education / Community Outreach Program Manager, FAA William J. Hughes Technical Center)

➔ **EAA's "Salute to Veterans" B-17 Tour** may be coming to [a town near you](#) soon! The tour brings the beautifully restored B-17 Flying Fortress *Aluminum Overcast* to a local airport for flight experiences and walk-through tours. Out of over 12,000 that were built, this aircraft is one of a handful of airworthy B-17s still flying.

August 22 - 24 Caldwell, NJ Essex County Airport	August 26 - 27 Trenton, NJ Trenton Mercer Airport
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EAA invites you to reserve a seat for a flight aboard this rare WW II bomber and experience "the ride of a lifetime. Reserve your seat today! Call 800-359-6217 or visit our website at www.b17.org

CLASSIFIEDS [Return to Contents](#)

AEP107 INVITES NEW MEMBERS TO JOIN

Aviation Exploring Post 107 always welcomes new members! We are coed, ages 14 through 20 and focused on "Aerospace Education and Youth Development". We have a very active aerospace program that networks our members within the aerospace community. For additional information, please contact: Tom Teel, 908 581 6876, tfteel@optonline.net , www.aep107.org .

SOMERSET SOARING VENTURES, INC. <http://www.somersetsoaring.com>

AEP107 Members, if you wish to be a volunteer Wing Walker for FFF, Inc., please contact Jay Hahola at the glider line on **SAT, 11:00 AM** weather permitting. Jay would like to meet you personally.

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AEP107 ALUMNI, please keep in touch with AEP107. We would love to know how you are and share some of what you are currently doing with our newer members.

Tom Teel / tfteel@optonline.net

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AEROSPACE PROGRAM – COMPLETED ACTIVITIES [Return to Contents](#)

AEP107 Members, please keep in touch with the AEP107 Flight Log. We would love to share your program activities. Please send program reports and pictures for our news letter to Tom Teel / tfteel@optonline.net.

THU, JUL 31, SMQ, Aerospace Presentation



Jared Isaacman of United Bank Card came to speak to AEP107 members, alum and parents last night. Jared started his business in 1999 at the age of 16 and while he has been incredibly successful, he was reluctant to talk to us about the business. **What he came to chat about was his recent around the world, record setting flight in his Cessna Mustang and we were all thrilled.** The flight took off in March with two pilots from another one of his investment companies 26North Aviation: Doug Demko joined us and contributed to the stories, and Shaun Leach who was unable to attend.

Explorers and friends heard about the details of setting world records, interesting approaches, challenging legs and the importance of handling. Jared also shared his current aircraft projects and some ideas for the future. It was a wonderful discussion and we hope both men will come back from time to time to update us on their adventures.

AEROSPACE EDUCATION & PERSONAL DEVELOPMENT

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AVIATION EXPLORING SCHOLARSHIPS

[National Aviation Explorer Scholarships \(10/\\$3,000 to \\$10,000\)](#)

The National Aviation Exploring Committee awards individual scholarships between \$3,000 and \$10,000 annually to aviation Explorers pursuing a career in the aviation industry. The intent of these scholarships is to identify and reward those individuals who best exemplify the qualities that lead to success in the aviation industry. Type of aviation Explorer scholarships: degree leading to an aviation profession, avionics repair program, recreational or pilot certificate, maintenance aircraft repair program, and aviation management program to include design, engineering, airport management, etc.

[Spartan School of Aeronautics \(Academic Scholarship Gift-in-Kind Valued at 4/\\$2,000\)](#)

Spartan School of Aeronautics offers four annual scholarships to encourage Aviation Explorers to enter and complete an aviation curriculum that will lead to an exciting, well-paying career in aviation as a professional pilot, aviation maintenance technician, avionics technician, or instrument technician.

AMERICA'S TOP STATE FOR BUSINESS

CNBC

http://media.cnbc.com/i/CNBC/Sections/News_And_Analysis/Specials/TopStates2008/IMAGES/ATS

We scored all 50 states—using publicly available data—on 40 different measures of competitiveness. States received points based on their rankings in each metric. Then, we separated those metrics into the ten broad categories, with input from business groups including the National Association of Manufacturers. We weighted the categories based on how frequently each is cited in state economic development marketing materials.

AEP107 NOTE: The top ten are shown. When lifecycle planning you may want to consider the state that you live in not only for jobs but cost of living also.

1	Texas	6	North Carolina
2	Virginia	7	South Dakota
3	Utah	8	Georgia
4	Idaho	9	Iowa

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5

[Colorado](#)

10

[Minnesota](#)

New Jersey is 18th

In The Shadow Of US Economic Woes, Province Shows Gains In Production, Orders

<http://www.aero-news.net/index.cfm?ContentBlockID=5582f053-9c02-42c9-9f0b-3487435125a5>

One of the world's great aerospace hubs, the Montreal region of Quebec possesses a workforce of an estimated 42,000 workers manufacturing everything from jet airliners to helicopters to flight simulators. But many are wondering if it's proximity to the economic slowdown in the United States and the effect of rising fuel costs will take the region from boom to bust.

AEP107 NOTE: Then again, you might also consider outside the USA in your life cycle planning.

Student gets aerospace experience as intern

http://www.redlandsdailyfacts.com/news/ci_10022628

Catherine Garcia, Staff Writer, Article Launched: 07/28/2008 12:40:33 PM PDT

This summer, Julianna Plumb of Redlands will get a firsthand look at what it's like to be an aerospace engineer.

Julianna, 17, is an intern at NASA's Dryden Flight Research Center at Edwards Air Force Base.

"This is definitely giving me a really good view of what it's like in the field," she said. "It gives me a more clear perspective."

A senior at Redlands High School, Julianna is ranked fifth in her class, plays golf and badminton, and is a member of the wind ensemble, Christian Club and Young Republicans Club.

Her internship is through **NASA's Interdisciplinary National Science Project Incorporating Research and Education Experience, or INSPIRE**. It is a multi-tiered program for students in high school or in their freshman year of college, and is designed to provide grade-appropriate NASA-related resources and experiences to encourage and reinforce students' aspirations to pursue science, technology, engineering and mathematics.

PUBLICATIONS WORTH LOOKING AT [Return to Contents](#)

Coed 14 through 20 readers of this Flight Log please send me your aerospace publications worth looking at.

AIR & SPACE MAGAZINE

WWW.AirSpaceMag.com

AVIATIONWEEK

<http://www.aviationweek.com/aw/>

GE AVIATION ENGINE EDUCATION

<http://www.geae.com/education/index.html>

SHORT MOVIE - BLUE BEAUTY

<http://www.greatdanepro.com/Blue%20Beauty/index.htm>

Submitted by Steve Pronko, AEP107 Parent

AIRVENTURE NEWS

It is with great sadness that AEP107 is not participating in Air Venture this year. We need to start working on next year. - Tom



The official daily newspaper of EAA AirVenture Oshkosh

Issues:

[July 27](#) | [July 28](#)

[July 29](#) | [July 30](#)

[July 31](#) | Aug 1

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Aug 2 | Aug 3

[DON'T MISS](#)

[Photo Gallery](#)

[EAA Radio](#)

[Video](#)

Rolls Launches GA Turboprop Engine

http://www.aviationweek.com/aw/generic/story_channel.jsp?channel=busav&id=news/RR07298.xml

Jul 29, 2008, By John Morris/[EAA AirVenture 2008, Oshkosh](#)

Rolls-Royce challenged general aviation to step up its use of turboprops with the launch at Oshkosh today of a next-generation 350-450 shp turboprop engine named the RR500.

"The RR500 is ideally positioned to capture significant market share in the light, fixed-wing general aviation segment," said Ken Roberts, president of Rolls-Royce helicopter business, which embraces turboprops too. According to the Rolls-Royce ten-year market forecast, 2,500 to 3,000 of these light aircraft will be delivered annually between 2010 and 2020.

"Not only does the RR500 deliver cost-effective turbine power in a lightweight, affordable, compact design, but it also appeals to a broad segment of the market historically limited to reciprocating engines."

DATE: 31/07/08

SOURCE: Flight Daily News <http://www.flightglobal.com/articles/2008/07/31/226253/oshkosh-2008-jump-forward-with-kodiaks-new-interior.html>

OSHKOSH 2008: Jump forward with Kodiak's new interior

The first production [Kodiak](#) utility aircraft fitted with a Timberline interior is on show at Oshkosh. Manufacturers [Quest](#) has just delivered the fifth Kodiak to a customer

OSHKOSH 2008: The new order at Eclipse is Buoyant about the future

SOURCE: Flight International, DATE: 31/07/08

<http://www.flightglobal.com/articles/2008/07/31/226251/oshkosh-2008-the-new-order-at-eclipse-is-buoyant-about-the.html>

If enough orders come in for the [Eclipse 400](#), it will enter production in 2011. "If there's not sufficient interest we'll give their (deposits) back," says acting CEO Roel Pieper, who took over in a surprise move announced Monday.

"The 400 will get a very specific program. It will not be allowed to influence the 500 in any way," he continues.

OSHKOSH 2008: EAA AirVenture crowd witness first flight of Martin jetpack

SOURCE: Flight International, DATE: 30/07/08

<http://www.flightglobal.com/articles/2008/07/30/226226/oshkosh-2008-eaa-airventure-crowd-witness-first-flight-of-martin-jetpack.html>

Crowds packed AeroShell Square to see the first-ever manned jetpack flight at [AirVenture](#) – and it was over before most onlookers could see.

The longest flight so far has been five and a half minutes and never higher than six feet. Most flights last 40 seconds, like yesterday's did, and most of the crowd could only see the top of its white composite frame.

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GE Aviation takes over Walter Engines

BY ČTK / PUBLISHED 7 JULY 2008

Hartford, July 4 (CTK) - US Company GE Aviation has completed the takeover of Czech aircraft engines maker Walter Engines (earlier Motorlet).

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The company has not disclosed the terms of the agreement but spokeswoman Deborah Case said the price was lower than \$70m (some Kc1bn).

GE Aviation announced already in August 2007 that it would take over Walter. The acquisition is to help the company expand its activities in the segment of small propeller engines.

Case said GE Aviation wanted to compete with the PT6 engines of the firm Pratt & Whitney Canada. Walter Engines specializes in the production of turboprop engines and certified aircraft components.

NASA eyes buying Japan's cargo spacecraft: report

<http://www.newsdaily.com/stories/t279266-nasa-japan>

Science Daily, Posted 2008/07/20 at 7:59 am EDT

TOKYO, July 20, 2008 (Reuters) — [NASA](#) has begun unofficial negotiations with [Japan's space agency](#) on purchasing units of an unmanned cargo transfer spacecraft as the successor to its space shuttles, the Yomiuri newspaper said on Sunday.

Such a deal would be the biggest in [Japan's](#) 50-year space development history, the paper added.

The H-2 Transfer Vehicle (HTV), which costs about 14 billion yen (\$131 million) each, is being developed by the Japan Aerospace Exploration Agency (JAXA) and domestic companies including [Mitsubishi Heavy Industries Ltd](#) and [Mitsubishi Electric Corp](#), the Yomiuri said.

Behind the move is NASA's concern that the retirement of its space shuttles in 2010 will make it difficult for the [U.S.](#) to fulfill its responsibilities to deliver water, food and materials for scientific experiments to the [International Space Station](#), the paper said.

The real action is in private jets

<http://www.msnbc.msn.com/id/25736328>

It's full speed ahead on orders for \$3 million-plus business aircraft

By Carol Matlack and Mark Scott, [BusinessWeek](#), July. 21, 2008

Visitors to Britain's Farnborough Air Show can easily overlook the display of business jets, tucked down at the end of a runway behind the sexy fighter planes and the big Boeing and Airbus aircraft. But business jets — luxury planes catering to corporate executives and the super-rich — are just about the hottest thing in aerospace these days.

Even as high oil prices crimp airline orders for big passenger planes, business-jet sales are booming. Deliveries are expected to top 1,200 this year, the third consecutive record year for the industry, and most analysts predict the numbers will keep rising at least until 2010. Sales over the next 10 years are likely to exceed \$220 billion, more than twice the figure over the preceding decade.

Cessna Reports Strong Profits, Outlook

http://www.aviationweek.com/aw/generic/story_generic.jsp?channel=businessweekly&id=news/CESS07308.xml

Jul 30, 2008 By David Collogan

Cessna Aircraft, which is boosting business jet production to meet demand, continues to be a star player in Textron's array of companies, according to second-quarter financial results.

Cessna's revenues were up nearly 20 percent in the second quarter to just more than \$1.5 billion. Operating profits for the Wichita, Kan. aircraft manufacturer jumped from \$200 million in the second quarter a year ago to \$262 million in the period just ended. The second quarter revenue boost reflects "delivery of 117 business jets compared to 95 in 2007, improved pricing and a benefit from the Columbia Aircraft Manufacturing Corporation acquisition," Textron said. The \$62 million increase in operating profits was attributed to "improved pricing, partially offset by inflation, and increased engineering and product development expense," Textron said

[Piper Aircraft](#) has successfully flown its prototype six-passenger single-engine PiperJet from the company's home base in Vero Beach, Florida.

[HTTP://WWW.FLIGHTGLOBAL.COM/ARTICLES/2008/07/30/226255/PICTURE-PIPER-FLIES-PIPERJET.HTML](http://www.flightglobal.com/articles/2008/07/30/226255/PICTURE-PIPER-FLIES-PIPERJET.HTML)

SOURCE: Flightglobal.com, By John Croft, DATE: 30/07/08

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Pilots Dave Schwartz and Buddy Sessoms departed Vero Beach in the [Williams FJ44-3AP-powered personal jet](#) at 1111 local time today, testing basic handling of the metal jet including the effects of pitch trim with power change and basic operations of the engine's full authority digital engine control (FADEC) system.

Southwest's 7 secrets for success

<http://www.msnbc.msn.com/id/25644111/page/2>

The airline stays profitable by keeping things simple, By Joe Brancatelli

Portfolio.com

updated 1:49 p.m. ET, Sun., July. 20, 2008

What's the airline-industry jargon for unconventional wisdom? Southwest Airlines.

By some estimates, the country's major carriers have consumed perhaps \$100 billion in capital during the past decade, but Southwest Airlines continues to be profitable. It's been in the black for 33 consecutive years and, last week, for the 127th consecutive quarter, it paid a modest dividend. Its balance sheet, with about \$3 billion in cash on hand and \$600 million in available credit, is the envy of an otherwise fuel-price-ravaged industry.

What does Southwest know that no one else in airlines does? It keeps things simple and consistent, which drives costs down, maximizes productive assets, and helps manage customer expectations.

1. One plane fits all
2. Point-to-point flying
3. Simple in-flight service
4. No frills, no fees
5. Strong management
6. A relatively happy workforce
7. Aggressive fuel hedging

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NASA Spacecraft Confirms Martian Water, Mission Extended

<http://www.sciencedaily.com/releases/2008/08/080801221019.htm>

ScienceDaily (Aug. 2, 2008) — Laboratory tests aboard NASA's Phoenix Mars Lander have identified water in a soil sample. The Lander's robotic arm delivered the sample Wednesday to an instrument that identifies vapors produced by the heating of samples.

U.S. B-52 bomber crashes off Guam, killing 2 crew

<http://www.newsdaily.com/stories/man241087-guam-plane>

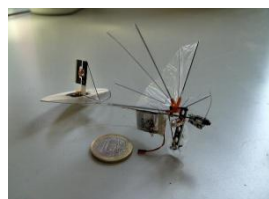
Posted 2008/07/21 at 4:55 pm EDT

MANILA, July 21, 2008 (Reuters) — Two U.S. airmen were killed and four missing after their [B-52](#) bomber crashed into the [Pacific Ocean](#) shortly after take-off on Monday, while preparing to fly in a Liberation Day parade in the [U.S.](#) territory of [Guam](#), officials said.

The bomber, which had no weapons on board, crashed at 9:45 a.m. local time (2345 GMT Sunday), about 15 minutes before the parade was due to begin, the [U.S. Air Force](#) said in a statement. There were six crew members.

There was no immediate word on the cause of the crash. The Air Force said a board of officers was investigating.

Micro Air Vehicle: Three Gram 'Dragonfly' Takes Flight



ScienceDaily (July 23, 2008) — Engineers have made a new tiny DeIFly Micro air vehicle. This successor to the DeIFly I and II weighs barely 3 grams, and with its flapping wings is very similar to a dragonfly. Ultra-small, remote-controlled micro aircraft with cameras, such as this DeIFly, may well be used in the future for observation flights in difficult-to-reach or dangerous areas.

The DeIFly Micro is a 'Micro Air Vehicle' (MAV), an exceptionally small remote-

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controlled aircraft with camera and image recognition software. The Micro, weighing just 3 grams and measuring 10 cm (wingtip to wingtip) is the considerably smaller successor to the successful DelFly I (2005) and DelFly II (2006). The DelFly Micro, with its minuscule battery weighing just 1 gram, can fly for approximately three minutes and has a maximum speed of 5 m/s.

Ultra-small remote-controlled, camera-equipped aircraft are potentially of great interest because they could eventually be used for observation flights in difficult-to-reach or dangerous areas.

Live and Let Fly

http://www.airspacemag.com/history-of-flight/Live_and_Let_Fly.html

Real pilots rate the performance of the airplanes in James Bond flicks.

By David Lande / **Air & Space Magazine, September 01, 2008**

Ever since audiences first saw British secret agent number 007, tangling with a claw-handed villain in the 1962 film *Dr. No*, James Bond has branded the concept of cool. This November, he's back—in a new Bond film, *Quantum of Solace*, which, like its predecessors, showcases the kind of fare worthy of Ian Fleming's suave super-spy: girls, gadgets, sports cars, and, best of all, airplanes.

At some point in every Bond film, the action takes to the sky. The aircraft, ranging from Harriers to Cessnas to hang gliders and flown by friend and foe, are typically cutting-edge for the time. The Bell Aerosystems rocket belt that propelled Bond to safety in *Thunderball* (1965) had been recently developed under a U.S. Army contract. The little autogyro in *You Only Live Twice* (1967) was a fresh design of record-setting pilot Ken Wallis. In *Moonraker* (1979), the now-familiar space shuttle blasted off the big screen two years before the maiden launch of the real thing. But in the upcoming *Quantum of Solace*, the airplanes have been around a while—a Douglas DC-3A built in 1939 shares the screen with a sleek and sinister black SIAI-Marchetti SF.260TP, a descendant of a 1960s design. (Please read the rest of the article online)

The Uncertain Future of the International Space Station: Analysis

http://www.popularmechanics.com/science/air_space/4275571.html?nav=RSS20

Still unfinished, engineers around the world ponder what to do with the space station—park it somewhere else, turn it into a lab or just let it burn. With calls to upconvert the ISS into a spaceship already hitting fever pitch, a leading aerospace expert checks in with some players from the space industry.

By Rand Simberg, Published on: July 29, 2008

The International Space Station isn't scheduled to be completed for two more years, but a growing chorus of engineers and executives is already brainstorming about what to do with the ISS after its life span ends in 2015. Given how long it has taken to put together the actual pieces in space—the Japanese experiment module Kibo was finally installed just a few weeks ago—and the tens of billions of dollars sunk into the station, it's understandable that many would like to see the working power of the ISS extended to 2020 or beyond. Plans range from the humble, like guiding it into a fiery reentry, to the ludicrous, like driving the station to the moon and parking it there.

Paint That Can Prevent Plane Crashes

http://www.sciencedaily.com/videos/2008/0703-paint_that_can_prevent_plane_crashes.htm

Chemists And Materials Scientists Develop Paint That Reveals Evidence Of Impacts

July 1, 2008 — Chemists created a paint embedded with pressure-sensitive capsules that contain a contrastingly colored dye. Violent scratches, dents, or strikes cause the capsules to burst. Visual inspections for changes in the color of the paint allow inspectors to pinpoint potentially damaged areas.

Microcapsules containing a colored dye are mixed together with aircraft paint. If the paint is scratched, dented, or struck the capsules break, releasing the dye. The change in color pinpoints damage. Visual inspections are easier and more accurate.

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Marine Worm's Jaws Say 'Cutting-edge New Aerospace Materials'

ScienceDaily (July 14, 2008) — Researchers in California and New Hampshire report the first detailed characterization of the protein composition of the hard, fang-like jaws of a common marine worm. Their work could lead to the design of a new class of super-strong, lightweight materials for use as construction and repair materials for spacecraft, airplanes, and other applications.



In the new study, Chris C. Broomell and colleagues note that *Nereis virens*, also known as the sandworm or ragworm, is a burrowing marine worm found in shallow waters in the North Atlantic region. Researchers remain intrigued by the remarkable hardness of its jaws and long pincers, which rivals that of human teeth and exceed the hardness of many synthetic plastics. But little is known about the exact chemical composition of these structures.

Broomell and colleagues collected the jaws of 1,000 worms and analyzed their protein content using high-tech instrumentation. They found that the primary chemical in the jaws and pincers of the worm is a unique protein, named *Nereis virens* jaw protein-1 (Nvj-1), which is rich in the amino acid histidine.

The researchers also characterized the chemical conditions needed for its formation, such as the presence of zinc, which could allow researchers to create synthetic versions of this super-hard, lightweight material.

Scientists Create Touch-based Illusion: Mind Trick Yields New Insights On Perception

<http://www.sciencedaily.com/releases/2008/07/080717134609.htm>

ScienceDaily (July 21, 2008) — Anyone who has seen an optical illusion can recall the quirky moment when you realize that the image being perceived is different from objective reality. Now, a team of scientists from MIT, Harvard and McGill has designed a new illusion involving the sense of touch, which is helping to glean new insights into perception and how different senses--such as touch and sight--work together.

Ambiguous visual images are fascinating because it is often difficult to imagine seeing them any other way--until something flips within the brain and the alternative perception is revealed. This phenomenon, known as perceptual rivalry, is of great interest to neuroscience. Because rivalrous illusions produce changes in perception that are independent of changes in the stimulus itself, they may help to understand how the brain gives rise to conscious experience.

"The most familiar illusions involve vision," explains Christopher Moore, a principal investigator at the McGovern Institute for Brain Research at MIT and an assistant professor in MIT's Department of Brain and Cognitive Sciences. "But we're interested in discovering general principles of perception, and we wanted to see whether similar illusions can occur in the tactile domain."

New Project To Develop GPS-like System For Moon

<http://www.sciencedaily.com/releases/2008/07/080721151938.htm>

ScienceDaily (July 22, 2008) — The same Ohio State University researcher who is helping rovers navigate on Mars is leading a new effort to help humans navigate on the moon.

When NASA returns to the moon -- the space agency has set a target date of 2020 to do so -- astronauts won't be able to use a global positioning system (GPS) to find their way around, explained Ron Li, the Lowber B. Strange Designated Professor of civil and environmental engineering and geodetic science.

The moon doesn't have satellites to send GPS signals.

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So NASA has awarded Li \$1.2 million over the next three years to develop a navigation system that will feel a lot like GPS to the astronauts that use it, but will rely on signals from a set of sensors including lunar beacons, stereo cameras, and orbital imaging sensors.

'Major Discovery' Primed To Unleash Solar Revolution: Scientists Mimic Essence Of Plants' Energy Storage System

ScienceDaily (Aug. 1, 2008) — In a revolutionary leap that could transform solar power from a marginal, boutique alternative into a mainstream energy source, MIT researchers have overcome a major barrier to large-scale solar power: storing energy for use when the sun doesn't shine.

Until now, solar power has been a daytime-only energy source, because storing extra solar energy for later use is prohibitively expensive and grossly inefficient. With today's announcement, MIT researchers have hit upon a simple, inexpensive, highly efficient process for storing solar energy.

PICTURE(S) OF THE MONTH [Return to Contents](#)

Picturing the Future

http://www.airspacemag.com/flight-today/hypersonic_art.html

How a skilled artist fast-forwards to the hypersonic airplanes of 2025.

By Paul DiMare / **Air & Space Magazine**, September 01, 2007

To illustrate our September 2007 feature on the future of hypersonic flight ("[Mach 20 or Bust](#)"), artist Paul DiMare had to envision vehicles that won't exist for another decade or more. We asked him to create animations showing the process of creating the images. Then we asked him to describe the steps. Not surprisingly, it begins with research ([Please read the article](#)).

