

Warming added as an extinction factor

Updated: 2:32 p.m. ET March 15, 2006

This report is part of a Reuters series exploring what some experts call an "extinction crisis." The series was written ahead of a March 20-31 meeting in Brazil of environment ministers from around the world to respond to threats to Earth's biodiversity.

"We are facing an extinction crisis," said Anne Larigauderie, head of Paris-based Diversitas, a group that promotes research into life on the planet.

She estimated the rate of loss of all species was now 10-100 times faster than little-understood rates from fossil records. The task of gauging the exact rate is complicated by the fact that no one knows exactly how many species exist.

Japanese pharmaceutical firm Eisai's ambition to expand the use of its dementia drug may have suffered a setback, after a trial testing the drug against vascular dementia revealed a higher incidence of death among patients.

There is no way to undo the brain damage caused by a stroke, but there are currently a handful of drugs used to slow the progression of the disease: Aricept, manufactured by Eisai and Pfizer; Reminyl by Johnson & Johnson and Shire Pharmaceuticals; Exelon from Novartis; Namenda by Forest Labs; and Ebixa by Netherlands-based Lundberg.

Google told to reveal Web sites, not search terms

By Eric Auchard and Adam Tanner

Evidence of universe's first instant

For a fleeting moment, the very fabric of the universe became a kind of hyperspeed spandex--stretching outward at perhaps 100 times the speed of light.

The discovery, announced Thursday, does not quite provide "smoking gun" confirmation of the concept, known as inflation. But scientists say they have detected wisps from the muzzle. With a few more years of data-gathering, they say they may be able to find the missing pieces that would clinch the case for a process widely held to have given the universe its initial "bang."

New denial-of-service threat emerges

A new kind of denial-of-service attack has emerged that delivers a heftier blow to organizations' systems than previously seen DOS threats, according to VeriSign's security chief.

But in this latest spate of DOS attacks, bots are sending queries to DNS (domain name system) servers with the return address pointed at the targeted victim. As a result, the DNS server, rather than the bot, makes the direct attack on the victim. The net result is a stronger attack and an increased difficulty in stopping it, Silva said.

Microsoft's Blue Hat Security Conference Made Public

What is discussed about in such events is usually kept strictly confidential and available only to a chosen few, as the topics covered concern aspects such as "exploiting web applications" and "breaking into database systems."

"Over the coming days, we'll be posting our reflections on Blue Hat 3, as well as photos and links to podcasts and video from the event," Kymberlee Price, a Microsoft security program manager, wrote on Thursday.

"We sincerely hope that our Blue Hat 3 speakers (and Blue Hat 1 and 2 speakers) will post their comments to the site as well and share their Blue Hat experience with you," Price added.

"It was open and honest discussion about problems specific to Microsoft technologies and also problems that affect our entire industry," conference organizer Brad Sarsfield, a Microsoft SQL Server coder, wrote in another Blue Hat blog posting.

"Hearing senior executives say things like, 'I want the people responsible for those features in my office early next week; I want to get to the bottom of this,' was at least one measure of success, from my point of view, for the event," Sarsfield added.

Spicy food could combat cancer

Vegetables such as broccoli and spices like red chilli pepper could be used to combat cancer, researchers have said.

They found that it affected the activity in the cells which induced programmed cell death--apoptosis--in the cancerous cells without affecting normal pancreatic cells.

A second study looked at benefits of phenethyl isothiocyanate (PEITC)--a constituent of cruciferous...

Are chocoholics' dreams coming true?

Company promises 'healthy' chocolate; experts skeptical

[A worker scrutinizes CocoaVia bars on an assembly line at Mars' Masterfoods plant in Albany, Georgia.]

ALBANY, Georgia (AP)--It's every chocolate lover's wish that their favorite indulgence could somehow be healthy for them. Now, chocolate makers claim they have granted that wish.

Apple, CBS Team on Basketball

March 15, 2006

CBS will test U.S. sports fans' tolerance for small screens by packaging condensed versions of the NCAA Division I basketball championship games for download from Apple's iTunes Music Store.

A fork in memory lane: UCSD research indicates hippocampus supports two aspects of recognition

February 02, 2006

Anyone who has recognized a person but then struggled with the particulars--"I know I know her, but how...?"--can also appreciate the distinction between "familiarity" and "recollection."

"It's our suspicion that the Trojans are small Kuiper Belt objects," said study leader Franck Marchis, a research astronomer at UC Berkeley.

Marchis and colleagues from the Institut de Mecanique Celeste et Calculs d'Ephemerides (IMCCE) at the Observatoire de Paris and from the W. M. Keck Observatory report their findings in the Feb. 2 issue of Nature.

The team's conclusion adds support to a recent hypothesis about the evolution of the orbits of our solar system's largest planets, Jupiter, Saturn, Uranus and Neptune, put forth by a group of researchers headed by Alessandro Morbidelli, a theoretical astronomer with the Conseil National de la Recherche Scientifique laboratory of the Observatoire de la Cote d'Azur, Nice, France.

Lawrence Berkeley National Laboratory

Date: 2005-10-23

Sunny Future For Nanocrystal Solar Cells

BERKELEY, CA--Imagine a future in which the rooftops of residential homes and commercial buildings can be laminated with inexpensive, ultra-thin films of nano-sized semiconductors that will efficiently convert sunlight into electrical power and provide virtually all of our electricity needs.

E-Tailers Get Apple Nastygrams

By Jonny Evans

02:00 AM Sep. 19, 2005 PT

Apple is ordering several online iPod accessory vendors to stop using the word "iPod" in their names or URLs.

Apple has sent legal notices to accessory vendors everythingipod.co.uk and iPodlife.

Friday, 10 February 2006, 13:35 CST

Pope Says Science No Threat to Faith

By Philip Pullella

VATICAN CITY--Science made such rapid progress in the 20th century that people may sometimes be confused about how the Christian faith can still be compatible with it, Pope Benedict said on Friday.

Olympic Advantage

02.16.06

The last Olympics' figure skating scandal led to a whole new scoring system. But as this ScienCentral News video reports, new research suggests that those who skate last tend to take home the gold.

Carbon dating dashes old theories

By John Noble Wilford

The New York Times

WEDNESDAY, FEBRUARY 22, 2006

New advances in radiocarbon dating are threatening to upend old theories about when modern humans colonized Europe from Africa, and how rapidly they advanced.

The research casts new light on significant patterns of human migration into Central and Western Europe in the crucial period from 50,000 to 35,000 years ago, scientists say. It suggests that the dispersal of anatomically modern Homo sapiens into Europe was more rapid than previously thought.

That, in turn, would mean that their coexistence with Neanderthals was briefer and their introduction of cave art, symbolic artifacts and personal ornamentation much earlier.

"Evidently the native Neanderthal populations of Europe succumbed much more rapidly to competition from the expanding biologically modern populations than previous estimates have generally assumed," Paul Mellars, an archaeologist at the University of Cambridge in England, wrote in the journal Nature that was published Wednesday.

While other scientists have for several years been pondering the implications of the revised radiocarbon dating for archaeological research throughout the world, Mellars's description of the new techniques and their significance is the first comprehensive review of the subject in a major journal.

The most pronounced discrepancies between radiocarbon and actual ages coincide with the fateful epoch when modern people first made themselves at home in Europe.

For years, it had been thought that modern humans from Africa began arriving in Western Europe at least 40,000 years ago, and so could have competed and mingled with the local population for at least 12,000 years.

The revised dating of fossils and artifacts leaves much less time when the two could have been in close contact.

Apple's ode to hackers

Developers embed poetic warning deep in OS X software

[Apple developers embedded a warning deep in its OS X software--in the form of a poem.]

SAN JOSE, California (AP)--Apple Computer Inc. has resorted to a poetic broadside in the inevitable cat-and-mouse game between hackers and high-tech companies.

University of Leeds

Date: 2006-01-31

Giving Deja Vu A Second Look

Many of us have experienced deja vu--the unsettling sensation of knowing that a situation could not have been experienced, combined with the feeling that it has. It is usually so fleeting that psychologists have until recently thought it impossible to study. But for some people, the feeling of having been there before is a persistent sensation, making every day a 'Groundhog Day.' Psychologists from Leeds' memory group are working with sufferers of chronic deja vu on the world's first study of the condition.

[Deja vu revisited--Dr. Chris Moulin believes the problems lie in the temporal lobe. (Image courtesy of University of Leeds)]

Dr. Chris Moulin first encountered chronic deja vu sufferers at a memory clinic. "We had a peculiar referral from a man who said there was no point visiting the clinic because he'd already been there, although this would have been impossible." The patient not only genuinely believed he had met Dr. Moulin before, he gave specific details about the times and places of these 'remembered' meetings.

Kama Sutra worm hits home

[Many users practiced 'safe computing' to avoid damage]

By Marsha Walton
CNN

ATLANTA, Georgia (CNN)--Many computer users around the globe apparently heeded the warnings about a worm with a sexy name and took precautions to protect their data from the destruction of "Kama Sutra."

Mars probe poised for 'hair-raising' orbit entry

11:26 27 February 2006
NewScientist.com news service
Maggie McKee

[The Mars Reconnaissance Orbiter must fire its thrusters for 27 minutes to enter orbit around Mars (Illustration: NASA/JPL-Caltech)]

NASA's Mars Reconnaissance Orbiter is preparing for a "hair-raising" entry into orbit around the Red Planet on 10 March, mission managers say. If successful, the spacecraft will spend seven months spiralling towards the planet until it skims just 300 kilometres from its surface--where it will study the planet's geology and climate in unprecedented detail.

'Death mask' of Shakespeare could be genuine: Report

Paris, Feb 23: A 17th-century death mask claimed to be that of William Shakespeare could be genuine, according to work by lab detectives reported in next Saturday's New Scientist magazine.

The mask, discovered in a ragpicker's shop in 1842 and now owned by the German city of Darmstadt, has long been a subject of controversy.

Sometimes articles from outside the U.S. include numbers with spaces instead of commas as separators:

For example, \$123,123,123,123,123,123,123,123,123.

Protein complex in brain found to cause memory loss

Wed Mar 15
2:01 PM ET

LONDON (Reuters)--Scientists have identified a substance in the brains of mice that causes memory loss, which could be a target for drugs to treat patients with Alzheimer's disease.

Using genetically-engineered mice that developed memory loss similar to people with Alzheimer's, the researchers discovered that it was caused by a protein complex.

Long distance lovers to virtually share a drink

Long distance lovers could soon be able to bond by sharing a wi-fi glass of wine.

Researchers at MIT's Media Lab in Boston say the idea is to give the feeling of a shared drinking experience....

Following tests in separate labs, Lee says the wireless glasses really do "help people feel as if they are sharing a drinking experience together."...

Anti-cholesterol drug may reverse heart disease

It's too soon to tell whether this shrinkage of artery blockages will result in fewer heart attacks.

Lowest 'that's ever been seen'

"The holy grail has always been to try to reverse the disease," and this study shows a way to do that, said Dr. Steven Nissen, the Cleveland Clinic cardiologist who led the research, whose results were released Monday by the Journal of the American Medical Association....

..."To my knowledge, this is the lowest cholesterol level that's ever been seen," Nissen said.

The amount of "good" cholesterol rose almost 15 percent, which was also unprecedented, he said.

"Traditional thinking has viewed atherosclerosis as an inexorably progressive disease for which even the most active therapies can merely slow advancement," the researchers said.

"The current study suggests that there is potential for a more optimistic strategy, in which aggressive" cholesterol-lowering treatments can reverse the disease, they said....

...In the study, Crestor got people's LDL, or "bad cholesterol," levels to around 60 milligrams per deciliter of blood, down from roughly 130 at the start of the experiment. HDL, or "good cholesterol," levels rose from 43 to 49....

..."This opens up the door that more aggressive therapy is going to be needed to regress the plaque," he said. Doctors will need to switch to the more effective therapies, such as Crestor, Vytorin and high-doses of Lipitor, to reach the more aggressive targets, Davidson said.

Tempting the customer, the inimitable Microsoft way

Saturday, March 25, 2006 at 0000 hours IST

..."This is classic Microsoft strategy, never a first mover but impressive once they get focused," said Ted Schadler, an analyst at Forrester Research. In its appeal to developers and companies, Microsoft is touting its ability to provide Web technology that brings together server, desktop and Internet software seamlessly.

Speaking of his company's plan, Bill Gates, the Microsoft chairman, said: "We will definitely have a comprehensive model. And there will be an integration benefit." Software tools have been a crucial part of Microsoft's success over the years. Monday, at a Web designers' conference in Las Vegas, Microsoft announced the release of its toolkit for a technology known as Ajax, which makes it possible for Internet-based software to mimic the appearance and responsiveness of desktop personal computer programs....

...In the competition for online advertising, Microsoft is betting that it can gain an edge by wooing developers with superior software tools. "Neither Google nor Yahoo has a developer framework," Gates said in an interview. "We think that a lot of advertising will cluster around the software tools that help people."...

..."This time, things are very different, and it won't be easy for Microsoft to compete as it has in the past," said Scott Dietzen, president and chief technology officer of Zimbra, a startup that uses Ajax technology to make e-mail systems....

...Internet Explorer 6, the previous version, was released five years ago. "We're doing a mea culpa saying, hey, we waited too long," Gates said.

The Microsoft moves, some analysts say, suggest that the company is moving in step with technology and market trends--and those could work to its advantage.

Microsoft, Richard Sherlund, an analyst at Goldman Sachs, wrote in a report Monday, "seems to be adapting to the new market dynamics in a way that could be complementary to its traditional business. The Web will be an extension of the desktop in a way that becomes more seamless, extending the capabilities of the desktop outward."

Source: BioMed Central
March 30, 2006

Horse Antibodies Against The Bird Flu Virus H5N1 Are Effective As Treatment In Mice

Antibodies against the bird flu virus H5N1, derived from horses, prevent mice infected with H5N1 from dying from the virus. A study published in the open access journal Respiratory Research (<http://respiratory-research.com>) reveals that a dose of 100 micro-g of horse anti-serum effectively protects infected mice. These results suggest that anti-H5N1 antibodies developed in horses could potentially be used to prevent death from H5N1 influenza, or as early treatment for the disease, in humans....

...The authors found that 50 micro-g of antibody protected 70% of the mice against death by H5N1 and 100 micro-g of antibody protected 100% of the mice. The mice in the control group died nine hours after receiving the normal horse serum.

Yun's Samsung Delays Blu-Ray Disc Player

Parmy Olson

04.04.06

11:52 AM ET

London--The season of delays must be upon us.

After Toshiba announced last month that it was delaying its HD DVD player, Samsung Electronics, led by Chief Executive Jong-Yong Yun, has now joined in the chorus. The Seoul, South Korea-based subsidiary of Samsung Group is delaying the launch of its rival high definition Blu-ray DVD player in the U.S. to June 25, a month behind schedule. No doubt this is music to the ears at Toshiba, whose U.S. launch is due later this month. Last Friday, Toshiba launched its HD DVD player in Japan as the first to be sold anywhere in the world....

...The original launch of May 23 had been the same day that Sony Pictures Home Entertainment and Lionsgate Films were to release their first Blu-ray disc movies, according to press reports. Sony Pictures though, is believed to still be committed to that date, even with no player on the shelves. If only Sony's PlayStation3--which features a Blu-ray disc player--hadn't been pushed back from this spring to November. But then this is the season of delays, after all.

For the uninitiated, there are various corporate advocates on either side of the DVD format war. In the Blu-ray camp along with Samsung and Sony is Matsushita Electric Industrial, which owns Panasonic, while HD DVD format advocates include Toshiba, NEC Corp. and Intel Corp. Eventually in this race to spawn the next generation of high definition DVD players, one side will come out as the consumer's choice. Though by then we may well have tired of watching a vigorous sprint which, with all these delays, has turned into something of a marathon.

4/5/2006 12:19:00 PM -0400

13-foot dinosaur raptor bones unveiled

SALT LAKE CITY, April 5 (UPI)--Five years after their discovery, the bones of a 7-foot-tall, 13-foot long new raptor dinosaur have been unveiled at the University of Utah.

The creature was also armed with sickle-like claws and covered with feathers, and date back 75 million years, said Scott Sampson, chief curator of the Utah Museum of Natural History.

Fluoride debate may surge as treated water linked to cancer

By Jessica Fargen

Thursday, April 6, 2006

Young boys who drink fluoridated tap water are at greater risk for a rare bone cancer, Harvard researchers reported yesterday.

The study, published online yesterday in a Harvard-affiliated journal, could intensify debate over fluoridation and mean more scrutiny for Harvard's Dr. Chester Douglass, accused of fudging the findings to downplay a cancer link.

"It's the best piece of work ever linking fluoride in tap water and bone cancer. It's pretty damning for (Douglass)," said Richard Wiles of the Environmental Working Group, which filed a complaint with the National Institutes of Health against Douglass.

Wed Apr 5 14:26:28 2006 Pacific Time

Harvard Study: Strong Link Between Fluoridated Water and Bone Cancer in Boys; Department Chair With Industry Ties Misrepresented Results to Federal Authorities

WASHINGTON, April 5 (AScribe Newswire)--Boys who drink water with levels of fluoride considered safe by federal guidelines are five times more likely to have a rare bone cancer than boys who drink unfluoridated water, according to a study by Harvard University scientists published in a peer-reviewed journal.

The study, led by Dr. Elise Bassin and published online today in *Cancer Causes and Control*, the official journal of the Harvard Center for Cancer Prevention, found a strong link between fluoridated drinking water and osteosarcoma, a rare and often fatal bone cancer, in boys. The study confirms studies by the National Institutes of Health (NIH) and the New Jersey health department that also found increased rates of bone cancer in boys who drank fluoridated tap water.

Does Fluoridation Up Bone Cancer Risk?

Study Examines Boyhood Drinking of Fluoridated Water and Possible Links to Osteosarcoma

By Daniel DeNoon

WebMD Medical News

Reviewed By Louise Chang, MD

on Thursday, April 06, 2006

April 6, 2006--Boys who drink fluoridated water have an increased risk of a deadly bone cancer, a new study suggests.

Komodo dragon highlights new lizard show

By F.N. D'ALESSIO

Associated Press Writer

Thursday, April 06, 2006

8:41 p.m. ET

CHICAGO (AP)--He's huge, he can be vicious and sometimes he stinks. His oral hygiene is so poor that if he bites you, you're pretty much guaranteed a life-threatening infection. He's going to be very popular....

...The show includes about 60 lizards from 30 different species--some of them quite spectacular--but aquarium officials acknowledge Faust is going to be the big draw. He's an example of the world's largest living lizard--and an endangered species....

..."Here, we're feeding him once a week, but smaller portions--we don't want him just lying there sleeping it off," Ramirez said. "He gets six or seven 1- to 1-1/2-pound rats at a sitting, and he eats the entire rat in one bite. When you set out those rats you see how fast he really can run."...

..."They've got a horrible reputation, but they can be fairly docile--at least when they don't want to mate and aren't hungry," Ramirez said. "At times like those you don't want to be around."...

...Among the other cold-blooded beasts on display are a uromastyk, which uses its spiny tail as a weapon, and a legless glass lizard from the Caucasus that looks like a snake, but isn't--for one thing, it has functioning eyelids....

What to do about warming? Experts weigh in

Whether individuals can even make a difference at this point is debatable

[A section of the ice sheet covering much of Greenland is seen in this Aug. 17 file photo. John Mcconnico / AP]

Updated: 7:30 p.m. ET April 3, 2006

WASHINGTON--A man stands on a railroad track as a train rumbles closer.

"Global warming?" he says. "Some say irreversible consequences are 30 years away. Thirty years. That won't affect me."

He steps off the tracks--just in time. But behind him is a little blonde-haired girl left in front of the roaring train.

The screen goes black. A message appears: "There's still time."

It's just an ad, part of a campaign from the advocacy group Environmental Defense, which hopes to convince Americans they can do something about global warming, that there's still time.

Source: Society for Experimental Biology
April 8, 2006

Fish On Acid: Hagfish Cope With High Levels Of Carbon Dioxide

The Pacific Hagfish is a strange animal: it feeds by gnawing its way into a carcass and staying inside to feed for up to 3 days.

Scientists at the University of British Columbia (Canada) believe the Hagfish's gruesome method of feeding may cause the stagnant water inside the carcass to become acidic from the build up of CO₂ produced by the fish, which could explain why the fish is able to cope with environmental conditions of up to 7% CO₂ (350 times that found in normal air). Dan Baker is presenting his latest findings at the Society for Experimental Biology Annual Meeting (April 5).

Mouse sheds light on regeneration

By Rebecca Morelle
BBC News science reporter

...Regeneration--the ability to recreate lost or damaged cells, tissues, organs or even limbs--has a limited capacity in humans and mammals....

..."So we did it again, and we watched them, and there it was--the holes had closed up. I thought, 'Oh my God, this is just amazing.'"

Staying Sharp As We Age

NEW YORK
April 11, 2006

Quote: "'Use it or lose it' applies to the mind, just as it does to the body."--Dr. Robert Butler of the International Longevity Center

(CBS) Some decrease in brain function is normal as we get older. But there are things you can do to delay and minimize those effects.

New device may cure cellulite, acne, heart disease: study

www.chinaview.cn
2006-04-11
09:47:51

BEIJING, April 11 (Xinhuanet)--A free-electron laser (FEL) could make cellulite, acne and even heart disease disappear, through targeting and melting fat under the skin, Professor Rox Anderson, a dermatologist at Massachusetts General Hospital in Boston, said lately....

...Anderson said, "we are still a few years away from testing this technique on human beings."

Editor: Han Lin

Venus Express probe enters into orbit

Last Updated Tue, 11 Apr 2006

11:14:13 EDT

CBC News

The European-built Venus Express spacecraft successfully went into orbit around Earth's closest planetary neighbour after a five-month journey, ground controllers said Tuesday....

..."This is a great success."

[The Venus Express, shown in an artist's depiction, is to orbit the planet for 1-1/2 years. (European Space Agency)]

Its mission is to find about the greenhouse effect--the way carbon dioxide traps the sun's heat on Venus--and to help scientists draw comparisons with global warming on Earth....

There's More Than Meets The Eye To Catching A Fly Ball In The Outfield

Contact: Lori Wright

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UNH Media Relations

April 10, 2006

DURHAM, N.H.--It looks so simple--catching a fly ball. But of all of the balls hit into the outfield, the straight shot is the most difficult to catch. And if it's twilight, it's even worse....

..."Good fielders do not run to a place where the ball will land and then wait for it, but rather catch the ball while running. This is contrary to what many coaches prescribe, which is to 'get under a ball and not drift on it,'" he says. "Without a side view of a ball, a fielder has mostly only information about angular velocity (rate of optical expansion of ball as it approaches) with little information on linear velocity."...

..."The batter purposely leaves eye contact mid-way through a pitch and makes an anticipatory saccade to the point just in front of where the ball crosses the plate. If the ball seems to rise (which it physically can't if it was thrown overhand), it is traveling faster than the batter initially thought, but now the batter has calibrated it. The batter now has an advantage if the pitcher throws the same type of pitch next time, but as someone once said, 'good hitting is timing; good pitching is upsetting this timing,'" Fuld says.

Actress-Turned-Nun Publicizes Disorder

Apr. 11, 2006

(AP) BEVERLY HILLS, Calif.--Dolores Hart, who at age 24 startled the film world in 1962 by leaving a thriving screen career--including two roles opposite Elvis Presley--to become a nun, has returned to Hollywood for her first visit after 43 years in a monastery.

Now the Rev. Mother Dolores Hart and prioress of the cloistered community at Abbey of Regina Laudis in Connecticut, she has been renewing friendships from her studio years.

Why? To spread awareness about a largely mysterious neurological disorder that afflicts countless Americans, including herself, called peripheral idiopathic neuropathy....

Scientists release new Venus images

By MELISSA EDDY

Associated Press Writer

Thursday, April 13, 2006

12:12 p.m. ET

BERLIN (AP)--European scientists on Thursday released the first photos of Venus' south pole from their orbiting Venus Express spacecraft--revealing a swirling twist of cloud that closely resembles cloud formations around the more familiar north pole....

"We can see there is a twister here that is similar to that which we know from the north pole," said Horst Uwe Keller, who leads the team operating the craft's wide-angle, multichannel camera--one of seven instruments aboard the Venus Express....

The 220-million euro (\$260-million) mission, the first to Venus since NASA sent up Magellan in 1989, aims to study the greenhouse effect on the planet, where the atmosphere is extremely hot and dense....

Asa Issie, Aramis and the origin of Australopithecus

The origin of Australopithecus, the genus widely interpreted as ancestral to Homo, is a central problem in human evolutionary studies.... Here we describe newly discovered fossils from the Middle Awash study area that extend the known Au. anamensis range into northeastern Ethiopia. The new fossils are from chronometrically controlled stratigraphic sequences and date to about 4.1-4.2 million years ago....

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Source: University of Michigan
April 14, 2006

African Amphibians Make Extreme Parental Sacrifice: The Skin Off Their Backs

Just as baby mammals depend on their mothers' milk, the young of the African amphibian *Boulengerula taitanus* nourish themselves by stripping off and eating the fat-rich outer layer of their mothers' skin, according to an international team of researchers that includes University of Michigan biologist Ronald Nussbaum....

Hatchlings of *B. taitanus*--a legless amphibian that looks something like an earthworm--are born with specialized teeth for peeling and eating skin. Their mothers' skin is specially modified to be particularly nutritious, and the young depend entirely on this food source for perhaps as long as four weeks, Nussbaum said....

Earlier observations of another species in the same order of amphibians foreshadowed the latest discovery. In the 1990s, the same research team found that newborn *Siphonops annulatus* had teeth and stayed with their mothers for some time after hatching. Those observations, coupled with the unusually pale skin color of mothers caring for young, led Nussbaum and colleagues to speculate that *S. annulatus* hatchlings fed on glandular secretions from the mother's skin, but the scientists never observed such behavior....

"We observed eight episodes of skin feeding by different young from five different broods," Nussbaum said. "In each episode, the young moved over and around their mothers' bodies, vigorously pressing their heads against their mothers while repeatedly opening and closing their mouths. They used their lower jaws to lift and peel the outer layer of the mother's skin."

Studies of the females' skin revealed that the outer layer is up to twice as thick in brooding females as in non-brooding females and is full of nutritious fat....

In those that bear live young, fetuses are equipped with specialized teeth--something like those of *B. taitanus* and *S. annulatus*--that are thought to be used for scraping secretions and cellular material from the lining of the mother's oviduct. The skin-feeding behavior seen in *B. taitanus* may represent an evolutionary intermediate between these two reproductive modes, Nussbaum said.

The discovery of this never-before-seen behavior also highlights the importance of conservation efforts, Nussbaum said. "Concerns have been growing about amphibian populations that appear to be declining worldwide. Our discovery underscores the need for further studies to better document the amazing diversity of amphibian life history strategies and greater efforts to conserve it."...

SR is able to distinguish between foot and inch marks, 10', 10", and quotes, 'single,' 'single,' '10,' or "double," "double," "10." (The marks were placed incorrectly in the previous sentence to demonstrate SR's ability.)

Heart research turns to women

By Denise Grad

The New York Times

WEDNESDAY, APRIL 19, 2006

Kim Kachmann-Geltz did everything right. She ran five miles a day, ate wheat toast and oatmeal, stayed slim, never smoked. Her blood pressure was perfect. Her genes, she thought, were good: Her great-grandmother had lived to 102.

"I'm the last person in the world I could ever imagine having heart disease," said Kachmann-Geltz, of Hilton Head, South Carolina, who is 39 and the mother of three children. But since 2003 she has suffered from angina, chest pain caused by inadequate blood flow to the heart. In addition, one chamber of her heart has shown signs of enlargement, and her heart valves do not work properly.

She takes four heart medicines and may eventually need more. Even with the drugs, chest pain keeps her from running. She walks instead and does yoga.

"It's not a death sentence," she said. "You don't have to live your life depressed." But her outlook is a mixed message. She describes her prognosis as good, yet also says the disease may shorten her life.

"We just don't know," she said.

Her case is unusual: Angina more often strikes older women. Still, coronary artery disease is the leading cause of death in women over 25, killing more than 250,000 a year in the United States. Before they reach their 60s, women are less likely than men to develop heart problems, but once the disease does occur, women often fare worse than men.

Since 1984, more women than men have died each year from heart disease, and though overall coronary death rates have dropped in recent decades, most of the improvements have been in men.

Puzzling differences have emerged between men and women with heart disease, making it plain that past studies, mostly on men, do not always apply to women. Researchers have come to realize that to improve diagnosis and treatment for women, they must sort out the differences.

"Every time we turn around, we find more gender differences, so it's important to study," said Dr. C. Noel Bairey Merz, a cardiologist at Cedars-Sinai Medical Center in Los Angeles.

Among the differences are these:

Women with chest pain and other heart symptoms are more likely than men to have clear coronary arteries when tests are performed, a surprising result that suggests there may be another cause for their problems.

When women do have blocked coronary arteries, they tend to be older than men with similar blockages and to have worse symptoms, including more chest pain and disability. These women are also more likely to have other problems like high blood pressure, high cholesterol and diabetes, which may make surgery riskier. And they are more likely than men to develop heart failure, a weakening of the heart muscle that can be debilitating and ultimately fatal.

When women have bypass surgery or balloon procedures for coronary blockages, they are less likely than men to have successful outcomes, and they are more likely to suffer from bad side effects.

Blood tests that reliably pick up signs of heart damage in men do not always work in women.

Women seem much more likely than men to develop a rare, temporary type of heart failure in response to severe emotional stress.

"We don't have good explanations for these gender differences," said Dr. Alice Jacobs, a cardiologist at Boston University. She said one reason women have not fared as well as men after bypass surgery and balloon procedures may be that women are smaller, and so are their blood vessels, which may tend to clog up again more easily after the procedures.

In addition, surgeons performing bypasses in women have been less likely to use an artery from inside the chest wall, because it is smaller and harder to work with--even though using the chest artery instead of a leg vein gives most patients better odds of long-term survival.

In the past, Jacobs said, cardiologists had only big balloons and bulky tubing to open blocked vessels, and some may have been too large for women. "Now we have tiny wires, balloons and stents, and it's less of an issue," she said, adding that success rates in women were improving.

Women like Kachmann-Geltz have become an important focus of study.

Her doctors believe she has an insidious type of heart disease, more common in women than men, that researchers are just beginning to understand. These patients have chest pain and abnormal stress tests.

Their heart muscle is starved for oxygen, yet their coronary arteries look wide open on an angiogram, the test in which doctors inject the vessels with dye and then X-ray them to spot blockages.

Some of these women also score poorly on the Duke Activity Status Index, which gauges their strength and ability to exercise by asking questions like whether they can walk up a flight of stairs or run a short distance. A low score is a reliable predictor of more heart problems to come.

For those with symptoms, the real, underlying problem may be a disorder called microvascular disease, a narrowing or stiffening of the smaller arteries that nourish the heart, vessels too tiny to show up on an angiogram. In microvascular disease, the small vessels lose their ability to dilate and increase blood flow to the heart. The cause does not seem to be fatty deposits like the ones that can block the coronary arteries. Rather, the muscles in the arterioles thicken, a process called remodeling, and the walls may stiffen and begin to close in. The result is ischemia, lack of blood flow. Over time, it increases the risk of heart failure and heart attacks.

Bairey Merz is the chairwoman of a government-sponsored study called Wise, for Women's Ischemia Syndrome

Evaluation. The study, begun in 1996, included 936 women who had angiograms because of symptoms like chest pain. Their average age was 58, but a quarter were younger and premenopausal.

The angiograms found that only a third had blockages in their coronary arteries. In men with similar symptoms, three-quarters or more would have had severe blockages, said Dr. Carl Pepine, an investigator in the study and the chief of cardiovascular medicine at the University of Florida.

Another third of the women had no blockages but did have low blood flow to the heart, most likely a result of microvascular disease.

Among those judged to have the disorder, the rate of deaths or heart attacks was 10 percent after four years, much higher than would be expected for women with normal angiograms.

The findings call for a major shift in the treatment of women with chest pain or other symptoms and normal angiograms, said Dr. George Sopko of the National Heart, Lung and Blood Institute. "Instead of tossing aside the angiogram and saying you're O.K., let's make sure we are not missing anything."

High cholesterol and blood pressure are almost certainly among the causes of microvascular disease, and it is essential to treat them aggressively in women with chest pain and to urge women to exercise, avoid smoking and lose weight if they are too heavy, Pepine said.

"Women who develop heart failure tolerate it much more poorly than men, and they tolerate heart attacks and bypass surgery more poorly than men," he said. "We don't want them to get to that stage."

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Ancient DNA provides clues to the evolution of social behavior

April 21, 2006

A rare Patagonian rodent known as the colonial tuco-tuco fascinates biologists because it seems to defy all odds. This threatened species has so little genetic diversity that the slightest whiff of climate change or disease should

have wiped it off the face of the earth long ago. Yet the hearty gopher-like creature has not only managed to survive for thousands of years in the harsh climate of the Argentine highlands, it has evolved a complex social structure that's unique among the more than 50 closely related tuco-tuco species.

Stanford University biologist Elizabeth Hadly and her colleagues are using DNA extracted from ancient teeth--some more than 10,000 years old--to unravel the colonial tuco-tuco's mysterious past and pinpoint the cause of its low genetic diversity. The results are published in the April 20 edition of the journal PLoS Genetics.

"This advance in the analysis is fundamentally different from anything anyone has done with ancient DNA," says Hadly, an associate professor of biological sciences and co-author of the study. "What we're trying to do is basically make a moving picture of their history instead of just a snapshot."

Adopting a colonial lifestyle may have been the key to the rodent's survival, Hadly asserts, and could provide insight into the evolution of social behavior in other animals, including ants and humans.

Population crash

Named for the "tuc-tuc-tuc" sound of its call, the colonial tuco-tuco (*Ctenomys sociabilis*) lives in remote highland savannah areas of southern Argentina. Unlike the more than 50 other tuco-tuco species that live mostly solitary lives, *C. sociabilis* lives in colonies. Several females frequently share one burrow and in captivity are known to nurse one another's young....

"When you talk about genetic variation being lost, you need to really reduce [the population] to a small number of individuals," Chan says.

By fitting modern and ancient DNA data into a standard population genetics model, Chan was able to pinpoint the drastic decline of *C. sociabilis* to about 2,600 years ago, when the population was likely reduced to less than 300 individuals. When a population becomes that small, it loses much of its genetic diversity--a phenomenon known as a genetic bottleneck. Chan thinks that a volcanic eruption known to have occurred in the Andes roughly 3,000 years ago, combined with environmental change and competition from the larger species of tuco-tuco, likely caused the die-off.

Most genetic studies rely entirely on modern DNA to estimate historical population size, but Hadly and Chan's technique provides much more detailed information. "You can't get the bottleneck time or the bottleneck size without both modern and ancient DNA," Chan explains.

Social evolution

Determining how the colonial tuco-tuco's diversity got so low only solves part of the mystery. "The really curious thing is how the species managed to persist for around 3,000 years with almost no genetic variation," Hadly says. "Genetic variation is the toolkit for dealing with whatever the environment has to throw at you. If you have only a couple of tools, you don't have a lot of resilience for dealing with an unexpected event."

According to Chan, the evolution of the colonial tuco-tuco's social behavior may be linked to the population bottleneck. Because all surviving colonial tuco-tucos are closely related, it makes sense evolutionarily for individuals to cooperate, she says.

"If you're closely related to everyone, there's not as much reason to fight," Chan explains. "Tucos have a high cost to dispersal--if they leave their burrow they tend to get eaten. If they stay home and help their sisters breed, it makes sense because they'll be helping to pass on genes that are almost identical to their own."

No one knows exactly when social behavior evolved in *C. sociabilis*, but Hadly suspects it was a response to the population crash. "Maybe the evolution of sociality actually confers some advantage to withstanding periods of low genetic diversity," she says. "Most behaviorists would say that sociality is so complicated that it takes a while to evolve, but maybe if a species has to be social to survive, social behavior could evolve pretty rapidly."...

"I think eventually this will feed back into modifying our understanding of population genetic theory and how sensitive it is to real-life events," Hadly explains.

Most of the work conducted in Hadly's lab focuses on using ancient DNA to examine how living species have responded to climate change in the past. With this information, she hopes to gain insights into the way current global warming trends will affect rare and threatened species, such as the colonial tuco-tuco.

"What better way to understand how tuco-tuco populations respond to environmental changes than to look at 10,000 years of their history," she says. "They're the survivors of the last big extinction event, so it seems logical to me that we should know how they did that."

Stanford University

Antioxidant Selenium Offers No Heart-Disease Protection

04/25/06

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BUFFALO, NY--Selenium does not protect against cardiovascular disease, despite its documented antioxidant and chemopreventive properties, analysis of a randomized placebo-controlled clinical trial covering 13 years has shown....

The main findings of this report focus on the 1,004 participants in the study, conducted from 1983-96, who were free of cardiovascular disease when they were recruited. Participants came from seven dermatology clinics in low selenium areas of the eastern United States: Augusta and Macon, GA; Columbia, SC; Miami, FL; Wilson and Greenville, NC; and Newington, CT...

APRIL 25, 2006

Technology

By Jack Ewing

Nokia Puts Your Digital Life in Your Hand

The handset maker introduces phones designed to do everything your video camera, computer, and iPod do. And they're always nearby

Marko Ahtisaari, Nokia's director of design strategy, sometimes begins the day by diving into a Finnish lake still partly covered in ice. He calls that a disruptive experience, and it's a metaphor for what Nokia is trying to do in the consumer electronics business. On Apr. 25, Nokia introduced new versions of its N series handsets, which mark the company's latest encroachment onto turf now occupied by outfits such as Sony, Canon, and Apple....

SPECIAL FOCUS. Purchasers will also get a free copy of Adobe Premier Elements 2.0 video editing software. Along with Carl Zeiss optics, image stabilization, and DVD-quality pictures, the software could encourage many casual users, at least, to use the N93 as their primary video camera. "It's a disruption of existing industries," says Anssi Vanjoki, a member of Nokia's executive board who is responsible for multimedia products....

Most important may be the devices' connectivity, including a browser that can handle normal Web sites. In Berlin, Nokia also announced a partnership with Yahoo's Flickr photo-sharing site. Built-in software will make it easy for owners of N series devices to upload photos to Flickr, where they will be accessible to friends and family. The new devices are also designed to connect to online music sites, PCs, and printers via wireless connections. Nokia is trying to ride along with the Internet's evolution into a space where people conduct their lives, letting them do so on the go....

That's one positive thing for companies such as Vodafone, Deutsche Telekom, and France Telecom. But given Nokia's global marketing might, the telcos as well as makers of consumer electronics should prepare themselves for some tough going ahead.

Late Bronze Age in Aegean a Century Older, Study Says (Update1)

April 27 (Bloomberg)--Radiocarbon dating pushes some events in the middle of the second millennium B.C. 100 years back into the past, possibly revising history in the Aegean Sea area near Greece and Turkey, a study in tomorrow's Science said.

"A new story may be written on the origins of early classical and Aegean civilization, which effectively becomes much of Western civilization," said Stuart Manning, a Cornell University professor of classics....

A separate study in Science placed the Santorini explosion at 1627 to 1600 B.C. instead of late 1500 B.C., using the branch of an olive tree on the island "killed by the eruption and covered by 14 inches of brimstone," said Jan Heinemeier, director of the AMS C14 Dating Centre at the University of Aarhus in Denmark, in an interview today.

"We have for the first time a very precise and direct date for the Minoan eruption," said lead investigator Walter Freidrich, associate professor of geology at the University of Aarhus, in a phone interview today....

"There's been 30 years of controversy in this field," Manning said. "There will be plenty of scientists lined up to be interviewed in the next week or so, happily enough, to say, 'Well, this is just impossible.'"

Ancient Etruscans unlikely ancestors of modern Tuscans, statistical testing reveals

May 26, 2006--For the first time, Stanford researchers have used novel statistical computer modeling to simulate demographic processes affecting the population of Tuscany over a 2,500-year time span. Rigorous tests used by the researchers have ruled out a genetic link between ancient Etruscans, the early inhabitants of central Italy, and the region's modern day residents....

"Very often, we assume the most simple explanation for something," said Mountain, an expert in anthropological genetics. "So when you find in a particular location the archeological remains of people, the simplest explanation is that those people are ancestral to whoever is living there now. How often do you get a chance to check that? Very rarely."...

The findings are documented in "Serial Coalescent Simulations Suggest a Weak Genealogical Relationship Between Etruscans and Modern Tuscans," published May 15 in the online version of Proceedings of the National Academy of Sciences. Uma Ramakrishnan, a former Stanford postdoctoral fellow, and Elise M. S. Belle and Guido Barbujani of the University of Ferrara in Italy co-authored the paper with Mountain....

"The Etruscans seem to be quite different in many ways from other ancient Italians, and archaeological evidence indicates that they spoke a non-Indo-European language," Mountain said. "Because of the cultural and linguistic shifts, scholars see the Etruscans as an enigma."

The Etruscans are the only preclassical European population to date that has been genetically analyzed, Mountain said. Two years ago, Italian geneticists extracted maternally inherited mitochondrial DNA from the bones of 27 people called Etruscans found in six different necropolises (burial sites) in Tuscany. The female lineage was investigated because, unlike the male Y chromosome, many copies of mitochondrial DNA are found in each cell and thus are easier to extract, Mountain explained. The data represent one of the best collections of ancient human DNA in existence. "If you get DNA out of one bone, you can try to say something about the past," Mountain said. "But they managed to get DNA out of quite a few bones." The DNA of 49 people living in the region today was also sampled. Although data from the two groups revealed several differences, Mountain said, the researchers could not interpret if these were meaningful or significant. "What we did was address the question: Do the present-day people look like they could be descendents of the Etruscan population?"

The answer surprised Mountain. "We did the simulation study and there was nothing we could do-we couldn't tweak it enough to get the modern people to look like they descended from the people in the Etruscan burial [sites]," she said. "We couldn't make it fit with the simple inheritance direct lineage model."

The Stanford researchers used recently developed software called "Serial SimCoal" to simulate genetic data based on different population scenarios, such as small (25,000 females) or large (300,000 females) populations of constant size, an expanding population, and scenarios involving migration and selection. Despite the range of scenarios created, the scientists could not find a match between the observed archaeological data and the simulations.

Christian Anderson, a former Stanford undergraduate, developed the software while working with Elizabeth Hadly, associate professor of biological sciences. She has used the approach to analyze the ancient DNA of small mammals. "I believe it's the first time it has been used to analyze ancient human DNA," Mountain said. "It's computationally intensive and requires DNA data from many individuals."

The finding is important because it questions the common assumption that residents of a particular place are descendants of its earlier inhabitants, Mountain said. "Also, it raises a number of other questions-what happened to the Etruscans?" she said. "It's stimulating for archaeologists and other social scientists to look into what might have been the causes of this decline in the population. It may have been quite abrupt. Mostly, it's a matter of guessing."

According to Mountain, the field of anthropological genetics is replete with such educated guesses. "There's so much storytelling that goes on in our field where people will see a particular genetic sequence and go, 'Aha! That means these people moved here and there,'" she said. "I tend to be fairly skeptical and say, 'That's a nice story.' Before [this study] you could tell a number of stories consistent with the data. What we've done is narrowed down these stories, which for me is a really great leap forward."

Stanford University

The tropics may be expanding

May 26, 2006--Atmospheric temperature measurements by U.S. weather satellites indicate Earth's hot, tropical zone has expanded farther from the equator since 1979, says a study by scientists from the University of Utah and University of Washington.

Researchers say the apparent north-south widening of the tropics amounts to 2 degrees of latitude or 140 miles. But they do not know yet if the tropical expansion was triggered by natural climate variation or by human-caused phenomena such as depletion of the atmosphere's ozone layer or global warming due to the greenhouse effect.

The study is being published in the Friday May 26 issue of the journal Science.

"It's a big deal. The tropics may be expanding and getting larger," says study co-author Thomas Reichler, an assistant professor of meteorology at the University of Utah. "If this is true, it also would mean that subtropical deserts are expanding into heavily populated midlatitude regions."...

Satellites Take Earth's Temperature

...There has been debate over the interpretation of atmospheric temperature measurements collected by microwave sounding units (MSUs) on the weather satellites. But Science reported in a May 12 news story ("No Doubt About It, the World Is Warming," page 825) that scientists with competing views hashed out their differences and now agree the weather satellite data show warming of the lower atmosphere, or troposphere, which extends from the ground up to 55,000 feet at the equator and 23,000 feet at the poles.

While those measurements dealt with global averages, the new study shows specifically that Earth's midlatitudes got about 1.5 degrees Fahrenheit warmer during the past 26 years, suggesting there has been a change in the average position of the subtropical jet streams. These rivers of air--one in the Northern Hemisphere and one in the Southern Hemisphere--move west to east and mark the meteorological transition from tropical to subtropical climates.

"We analyzed 26-year-long satellite measurements of atmospheric temperatures and found a distinct and very robust pattern of warming, which suggests that each subtropical jet stream has moved poleward by about 1 degree latitude," Reichler says. "This poleward movement took place over both hemispheres, indicating that the tropics have been widening. Independent [weather balloon] observations of the atmosphere confirm these findings."

He adds: "The possible expansion of the tropics may be a totally new aspect of climate change. We don't know for sure what triggered it. My research is investigating whether it is related to global warming or not. One can certainly think of various mechanisms of how global warming-related changes in the atmosphere could induce the changes we see. But it's very speculative at this point. That's what our research is going to look at."

The tropical zone is defined geographically as the portion of Earth's surface characterized by hot weather and located between the Tropic of Cancer at 23.5 degrees north latitude and the Tropic of Capricorn at 23.5 degrees south latitude. But meteorologists generally consider the tropics extend 30 degrees latitude north and south of the equator.

The subtropics--which also tend to have hot climates--are the indefinite belts in the Northern and Southern Hemispheres that are between tropical and temperate zones. The U.S. desert Southwest is considered subtropical, Reichler says....

"This pattern of warming in the troposphere where we live and cooling of the stratosphere above may actually cause a change of the jet positions," Reichler says.

Global warming might cause tropical expansion another way, he adds. The El Nino climate phenomenon--characterized by a pool of warm water in the western tropical Pacific moving eastward toward the Americas--often causes warmer, drier summers at midlatitudes. Other studies have shown tropical sea surface temperatures have warmed during the past 25 years. If ocean warming by El Nino can cause warmer, drier summers, then so should a general increase in tropical ocean temperatures--a possible mechanism for tropical expansion, Reichler says.

The researchers considered the possibility that the 26-year warming trend might be an illusion caused by data from the strong El Nino of 1997, which caused record midlatitude temperatures in 1998. But the midlatitude warming trend remained even when data from the 1997 El Nino was excluded.

If global warming isn't responsible for tropical expansion, another possible cause is the depletion of the stratospheric ozone layer due to pollutants such as refrigerant gases. Ozone loss cools the stratosphere while the troposphere warms--the same pattern from global warming due to greenhouse gases.

University of Utah

June 6 Focuses Attention on "666" Superstitions

June 02, 2006--"Let anyone with understanding calculate the number of the beast, for it is the number of a person. Its number is six hundred sixty-six." (Revelation 13:16-18, New Revised Standard Version)

BUFFALO, N.Y.--The number 666--the "number of the beast," according to the Book of Revelation--conjures devilish images for many, so forecasts of evil, even doom, are rampant regarding dates or places where the number occurs, including next Tuesday, June 6, or 6-6-06.

Fears of 666, long believed to be the dreaded mark of Satan, are based on a "widespread misinterpretation" of the chapter in Revelation--appropriately, chapter 13--in which the number is discussed, according to a University at Buffalo expert on the origins, nature and meaning of cults, superstitions and cultural identities.

Phillips Stevens, Jr., Ph.D., associate professor of anthropology, explains that "like most superstitions, the avoidance of the numbers 13 and 666 are examples of magical thinking.

"People everywhere believe that things associated with other things, through actual contact or just some similarity, have causal relationships, even over space and time," Stevens says. "Things associated with good events or great people can bring good fortune; things associated with failure, disastrous events or evil people carry some of that negativity with them."

And, like many superstitions, the one regarding 666 is based on incorrect data: the "beast" referred to in the chapter is not Satan, but, in fact, several other entities.

"Revelation is a complex and confusing book, and is rarely read closely by lay people. Biblical scholars have pointed out that there are several 'beasts,' in Chapter 13 and elsewhere, and they all refer variously to Rome, Roman emperors and Roman cults of god- and emperor-worship," Stevens says.

"Revelation" author, John of Patmos, traditionally believed to be St. John the Apostle, was writing to other persecuted Christians in code, according to Stevens, so "many of the strange elements in 'Revelation' signify events, people or institutions familiar to first-century Christians.

"The mark of the beast, 666, signifies those in thrall to the emperor and thus opposed to Christianity, and is

most probably the numerical equivalent of the Hebrew letters for Nero," Stevens says.

The First and Second Letters of John use the term "Antichrist" to denote lapsed Christians. Over subsequent centuries, the legend developed that the "end times" would be foreshadowed by the arrival of the Antichrist, an evil figure commissioned by Satan to prepare the world for his coming.

"Many perceived enemies of Christianity have been labeled the Antichrist, and Nero was one of the first," Stevens says, adding that there is an ever-growing, ever-changing list of persons considered the Antichrist that features "a long string of mostly historical figures--Saladin was on the list, as was Hitler, and Saddam Hussein. The list varies according to who compiles it. Early Reformation-era Protestants had some popes on their list."

Chapter 13 in Revelation declares that the Antichrist was empowered by Satan, who is described as a dragon.

"So, although 'the beast' is not Satan, in Christian tradition 'the mark of the beast' was authorized by Satan," Stevens says. "And so, like that other Christian superstition, Friday the 13th--from the Last Supper, where there were 13 people at the table, and the Crucifixion occurred the next day, a Friday--666 has become a strong taboo, avoided because of its negative association."

Generations have shunned the number to the point that it is erased or changed if and when it appears, Stevens notes. Authorities have re-numbered various U.S. highways previously numbered 666, and the town of Bel Air, Calif., changed the 666 street number of the house that President Ronald Reagan purchased upon leaving Washington, D.C.

Beyond mere superstition, many others believe conspiracy theories that have cropped up regarding the number 666, Stevens adds.

"They believe the sinister number 666 is encoded in our nation's banking system, in our medical and governmental records, and in our very identity, in personal documents and in UPC bar codes--this latter is evidence of the fulfillment of Revelation prophecy," he says.

No surprise, then, that someone has found a way to make money off all these fears: coming soon is a remake of the 1976 horror film, "The Omen," the story of a modern-day birth of an Antichrist figure in the form of an evil boy named Damien (the original starred Gregory Peck and Lee Remick). Producers have scheduled the movie's release date for--when else?--next Tuesday, June 6, 2006.

Perhaps tickets should be sold for \$6.66?

The University at Buffalo

Worms Hold Clue To Link Between Cancer And Ageing In Humans

..."Statistically, we know that aging is a huge risk factor for cancer," said Buck faculty member Gordon Lithgow, PhD, lead author of the study. "We don't know why that is. If we look at checkpoint proteins as a gear--we've known for a long time that they drive the cancer gear, now we know that they also drive a longevity gear. This discovery has exciting potential as area of inquiry into a potential cellular link between aging and cancer."

The research carried out in the Buck Institute's Lithgow Laboratory, involved genetically eliminating checkpoint proteins in the microscopic worms. This caused a 15-30% increase in their lifespan. Given the role that checkpoint proteins play in preventing the development of cancer (or in encouraging it when the proteins are defective), the findings raise the question of whether genetic variations in checkpoint proteins in humans may place some individuals at risk for cancer, but protect them against other age-associated diseases; or conversely, set a genetic course for a shorter life which would be free from cancer....