

OPUNTIA

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Whole-numbered OPUNTIAs are sercon, x.1 issues are reviewzines, x.2 issues are indexes, x.3 issues are apazines, and x.5 issues are perzines.

ALTERNATIVE HISTORY REVIEWS

by Dale Speirs

OTHER EARTHS is an anthology of original stories edited by Nick Gevers and Jay Lake (2009, mass-market paperback). They mention in their foreword that AH has come to occupy a ghetto within the genre of speculative fiction. I've written in the past that I consider it as a sub-genre, but nowadays there is so much of it that I think it would be fair to classify it as a genre in its own right.

The lead-off story of this anthology is "This Peaceable Land" by Robert Charles Wilson, set in the American South of 1895. There had been no Civil War or abolition of slavery. The peculiar institution had died out on its own, killed off by scientific agriculture and modern methods of farming that did not support the plantation way of life. Racism is still prevalent however. The narrator, a white man traveling with a Canadian Negro who hired him to take photos for a book he is writing, has to pretend to be the boss. They are looking for Liberty Lodges, where freed slaves who had no other place to go were kept in barracks. The Lodges gradually evolved into a Final Solution of what to do with Negroes, and the system only ended when there were no more left to kill. Evidence of the Lodges was ruthlessly suppressed by embarrassed governments. Now, years later, the two men have come to document the system.

“The Goat Variations” by Jeff Vandermeer has the USA as a parliamentary democracy fighting an extended civil war in the central Great Plains states against theocrats. Thrown into the mix are psychic adepts who make vague predictions about the future and a time machine that turns out to be a multiverse machine. The President can see into other universes, including an AH where terrorists fly passenger jets into the Twin Towers. The topicality of this story will ensure its quick consignment into oblivion. In any event, it is not AH but a multiverse story.

“The Unblinking Eye” by Stephen Baxter starts off with Inca ships visiting a Europe in 1966 that is far behind in technology. The Ottoman Empire had conquered Vienna, Charles Darwin became the Dean of St. Paul’s Cathedral, and Christianity worships Christus Ra as a result of the Romans being overly influenced by the Egyptians. Various other points of divergence are sprinkled about at random. The plot concerns an exchange of hostages, or more politely, redundant young princes, between the Incan and Frankish empires. Europeans had never learned to navigate the northern hemisphere because there are no stars in the sky, just the Moon and the wandering planets. As the Incan ship crosses the equator, they show the Europeans a southern sky filled with stars. It seems that long ago the solar system was ejected from the Milky Way at a perpendicular angle to the galaxy.

The next two stories, “Csilla’s Story” by Theodora Goss and

“Winterborn” by Liz Williams, are not AH but fantasy. Both involve the fairy world and its myths and magic, the former in Hungary and the latter in England. Whatever their literary merits, they are in this anthology under false pretenses.

“Donovan Sent Us” by Gene Wolfe is an England-lost-the-war story, set in the aftermath of the Nazi occupation of England. Roosevelt had lost his 1940 run for the presidency because he let 1.5 million Jewish refugees into the USA. He was defeated by the leader of the German-American Bund, who then supplied Germany with munitions. An American infiltrator with the OSS has been sent to London to extract a prisoner of war, Winston Churchill, who is being smuggled to America in the hopes of overthrowing the Bund. There is a surprise ending, but logical.

“The Holy City And Em’s Reptile Farm” by Greg van Eekhout is a very wild AH divergence where Jesus spread his gospel through North America. The Templars (= Roman Catholic Church) are all powerful, until the protagonist steals the Holy Grail from them for her family’s roadside reptile zoo and museum.

“The Receivers” by Alastair Reynolds is an AH WW1 that never ended, and still drags on twenty years later. Ralph Vaughn Williams is an ambulance driver, but we know it is AH because the narrator mentions in passing that when he was an anti-aircraft gunner he shot down several spotter planes, a flying wing, and

a zeppelin. It's not real AH until those zeppelins show up. In this story, instead of developing radar, the British develop giant concrete acoustic detectors that look like radio telescopes but can hear sounds on the other side of the English Channel. Quite useful for early warning of bomber flights coming across from occupied France.

The last two stories are self-referential exercises. "A Family History" by Paul Park supposes Louisiana stayed French, and the Americans are provoking the native tribes in the hope of grabbing land. He then writes another variation on that theme, ending up in his own family genealogy. The next story, "Dog-Eared Paperback Of My Life" by Lucius Shepard is about an author who finds a paperback by an AH version of himself that apparently slipped across the timelines. He ends up plagiarizing himself, both the book and his AH life.

THE GREATEST WEALTH TRANSFER

by Dale Speirs

GUIDE TO INVESTING IN GOLD AND SILVER (2008, trade paperback) by Michael Maloney is part of the Rich Dad series of financial guidebooks. It discusses the greatest transfer of wealth in history, now underway, from average citizens who placed their

faith in fiat currency, publicly-traded stocks, and residential real estate, to the Wall Street banksters and international sharp-practice men, who know what is coming and will thrive in the economic chaos. You can complain about the shenanigans of the U.S. Federal Reserve, or you can realize the banksters are unstoppable and you might as well protect yourself proactively. This book provides the history of the world's financial system, why lots of people saw the Panic of 2008 coming, and how individuals can stand on their own two feet instead of being buffeted about like General Motors pensioners or California state employees.

Maloney starts off by discussing some terms which the average person does not correctly understand, such as the difference between currency and money. Money is a store of value and is always worth something, while currency is a medium of exchange, an accounting unit that does not store value. The only two types of money that 5,000 years of human history has permanently established are gold and silver. Currency is pieces of paper, cowrie shells, tally sticks, or electrons in a computer, and does not hold its value. Inflation is the expansion of the currency supply beyond what is needed for legitimate daily commerce. It used to be created by debasing the amount of gold or silver in coins while keeping the face value the same. Later it was done by running the printing presses overtime. Today it is done by adding zeroes to a column of numbers in a computer database.

The result is that the price of everything soars while the value remains the same. Inflation is essentially theft by government, and transfers wealth to them from the sheeple.

Maloney doesn't take this as a government-is-evil theme, though. He points out that all governments can be brought down by the will of the people, if not by elections, then by revolution. If the sheeple will not rise up, the banksters assume they have consent, or as the Chinese say, the mandate of heaven. Maloney goes into a history of currency blow-ups from the ancient Greeks to the U.S. Federal Reserve. He discusses how the expansion of fractional reserve banking (banks only need to keep \$1 of reserves for every \$10 of loans created) led to the post-World War One weakening of the gold standard and its eventual failure in 1971. Gold then became a liberated commodity and its price soared from \$35 an ounce in 1974, never to go back.

More importantly is the effect of inflation, which most people don't realize. Maloney uses the Dow Jones Industrial Average (DJIA) as a case history. In 1999, it took 45 ounces of gold to buy one Dow share (one of each share listed on the New York Stock Exchange). In early 2008 before the panic, it only took 15 ounces to buy a Dow share. Nowadays as I write this review in middle 2009, it would only take 10 ounces. Yet in dollar terms the DJIA rose steadily until 2008, making it appear a successful investment. Even now, after the Panic of 2008, the DJIA seems to be

recovering in dollar terms, but its value in gold is still down. If priced in barrels of oil, the drop is even more pronounced. In 1999, it took 800 barrels of oil to buy a Dow share, in early 2008 only 100 barrels, and in the middle of 2009 about 135 barrels.

Governments use the Consumer Price Index because its data are fudged to give lower inflation. Most indexed pensions and subsidies are based on the CPI, so it is important to force it low. The actual inflation rates are currently running at 10% to 12% annually, using the original methodology (see shadowstats.com for the true data). A recent change is for central banks to talk about core inflation, which excludes food and energy. This has been swallowed whole by the mass media and the sheeple despite the obvious flaw that food and energy are the two most important components of daily life, and are the real core, not the price of large-screen television sets. From there, Maloney goes on to discuss ballooning currency creation by countries and the even worse derivatives creation by Wall Street. Derivatives are toxic paper currently about twenty times the total global real economy.

After all those chapters of background, Maloney finally gets to the nominal subject of this book. He presents the possible scenarios of the near future, which are status quo (painful in itself), deflation (debtors lose everything), inflation (the middle class lose everything), and hyperinflation (creditors lose everything).

In all these scenarios, only gold and silver will hold their value, and those who have debt will be wiped out, just as they were in the Great Depression and the lost decade of the 1980s recession. Those who have bullion squirreled away will be able to buy assets for pennies on the dollar.

The point is emphasized that buying gold and silver means buying physical metal and storing it in your safe-deposit box or hiding it in your house. Buying futures contracts, options, or index funds is buying paper. The great danger in buying paper is that if the counterparty (bank or brokerage) is caught out on the wrong side of the bet, they will simply change the rules by declaring cash-only settlement, going bankrupt, or freezing your account at a lower price. (And the fine print in their contract says they can do it.) With physical bullion, there is no counterparty risk. Eric Sprott once remarked that the Wall Street banksters regard individual investors as “the plankton of the financial world”.

I know that many of my readers don't have too much spending money, but even if you can't afford gold coins, silver is a good alternative, currently about US\$18 an ounce. You should have some of your savings in physical metal for long-term piece of mind. As General Motors workers found out, your company pension may not be there when you retire, but precious metals are always worth something. This book will get you started and help you know where you are going and why.

WE SHALL GATHER BY THE RIVER

by Dale Speirs

MR. MONK IN OUTER SPACE by Lee Goldberg (2008, mass market paperback) is based on the television series MONK, about an obsessive-compulsive detective. I have never watched the series and don't intend to, nor will I be buying all the novels based on it. I picked up this novel because it fits in with one of my sub-collections of fiction, that of stories set at conventions or in fandom. Attached to this review is a checklist of fiction I have related to conventions.

In the narrative for this novel, while investigating a murder, Adrian Monk visits an SF convention for the television series “Beyond Earth”. The show's creator was murdered by someone in a starship officer's uniform, and away the plot goes. The novel is an hilarious takeoff of Star Trek fandom, right down to the Earthers versus Earthies nomenclatural dispute. The description of the dealer bourse is spot on, as is the one of fans lining up to pay \$20 to have their photo taken with an aging actress who had a minor part in the show. It turns out that Monk's agoraphobic brother Ambrose is a fan and wrote several books on the series. This makes sense, as an agoraphobe who never leaves his house would watch a lot of television.

Several murders are done, suspicion is strewn about like road salt, and the culprit has his collar felt. I read this book straight through, something I haven't done in years with most novels I read. Quite enjoyable.

I also picked up DALEK I LOVED YOU (2008, trade paperback) by Nick Griffiths, billed as the life of a Dr Who fan. I was expecting an insight into the fandom of that show, but was disappointed. It is mostly a memoir of the author's childhood, interspersed with brief accounts of Dr Who episodes he watched, knick-knacks he bought, and after he became a freelance writer, entirely uninformative information about interviewing some of the show's actors. This book never sullied my library; after finishing it I consigned it straight to the Co-op Book Exchange. Not recommended.

CHECKLIST OF FICTION ABOUT CONVENTIONS

compiled by Dale Speirs

An all-caps title indicates a novel, while mixed-case titles in quotation marks are short stories in a magazine or anthology.

Science Fiction Conventions.

ALTERNATE SKIFFY (anthology)
Mike Resnick and Patrick Nielsen Hayden (editors) 1997

ALTERNATE WORLDCONS (anthology)
Mike Resnick (editor) 1994

BIMBOS OF THE DEATH SUN
Sharyn McCrumb 1988

CAT IN A KIWI CON
Carole Nelson Douglas 2000

DEEP SECRET
Diana Wynne Jones 1997

"The Fantasy People" (in NEW WORLD WRITING)
David Allen Ish 1956

MR. MONK IN OUTER SPACE
Lee Goldberg 2008

MURDERCON
Richard Purtill 1982

SCI FI
William Marshall 1981

WE'LL ALWAYS HAVE PARROTS
Donna Andrew 2004

ZOMBIES OF THE GENE POOL

Sharyn McCrumb 1992

Mystery Fiction Conventions.

BELL, BOOK, AND SCANDAL

Jill Churchill 2003

A CONVENTIONAL CORPSE

Joan Hess 2000

“Murder At The Bouchercon”

(in ELLERY QUEEN’S MYSTERY MAGAZINE)

Edward D. Hoch 1983 Nov

Miscellaneous Conventions.

CATNAP (publishers convention)

Carole Nelson Douglas 1992

MURDER AT THE ABA

Isaac Asimov 1976

BEST IN SHOW (dog show)

Lauren Berenson 2003

CONSPIRACIES

(conspiracy theorists)

F. Paul Wilson

2000

SMALL WORLD

(academic conference)

David Lodge

1984

“The Anarchists’ Convention”

(in THE ATLANTIC)

John Sayles

1979 Feb

ZINE LISTINGS

by Dale Speirs

[The Usual means \$3 cash (\$5 overseas), trade for your zine, or letter of comment on a previous issue. Americans: please don’t send cheques for small amounts to Canada or overseas (the bank fee to cash them is usually more than the amount) or mint USA stamps (which are not valid for postage outside USA). US\$ banknotes are acceptable around the world. SF means science fiction. An apazine is a zine for an amateur press association distro, a perzine is a personal zine, sercon is serious-constructive, and a genzine is a general zine]

Faculae And Filigree #3 (The Usual from Heath Row, 101 Russell Street #4-R, Brooklyn, New York 11222) Apazine for Slanapa, with some remarks on SFdom, the weekly Los Angeles apa, a book review, and mailing comments.

The Zine Dump #23 (The Usual from Guy Lillian, 8700 Millicent Way #1501, Shreveport, Louisiana 71115) Reviewzine of SF zines, with a few anticipatory remarks about the Montréal Worldcon.

MarkTime #92 to #94 (The Usual from Mark Strickert, Box 1051, Orange, California 92856) Perzine bringing us up to date on Mark's newborn son and impending nuptials, transit fanning, radio fanning, and letters of comment.

EOD Letter #10 and #11 (The Usual from Ken Faig Jr, 2311 Swainwood Drive, Glenview, Illinois 60025-2741) Apazine devoted to H.P. Lovecraft, with a review of an HPL story adapted for the stage, a essay on where HPL got the names of Polish characters in a story, book reviews, and a reprint from a zinester who knew HPL. There is another installment of research on the very messy question of who, if anyone, owns the copyrights to the HPL stories, with a reproduction of the actual probate papers filed in court by his executor.

Challenger #30 (The Usual from Guy Lillian, 8700 Millicent Way #1501, Shreveport, Louisiana 71115) Doorstop-category zine with 102 pages of essays and letters of comment. The theme of this issue is faith, not just theological musings but the practical aspects. There is an account by a survivor of how a gunman walked into a church service while the children's choir was

performing and opened fire, and Mike Resnick explains the trouble he had getting a novel published about a Jewish Messiah.

Ethel The Aardvark #142 and #143 (The Usual from Melbourne SF Club, Box 212, World Trade Centre, Melbourne, Victoria 8005, Australia) SF clubzine with news of fandom, book and movie reviews, club news, and letters of comment.

For The Clerisy #76 and #77 (The Usual from Brant Kresovich, Box 404, Getzville, New York 14068-0404) Hundreds of reviews of older books, mostly novels and travel.

Worst Future Ever #1 (The Usual from John Donahue, Box 340971, Columbus, Ohio 43234) A new zine that looks at how people imagined the future might be, set in the context of their times. This first issue considers the Red Menace, with a look at the films RED DAWN, ALL THE KING'S HORSES, THE FACTS REBEL, THE DAY AFTER, and AMERIKA.

Narcolepsy Press Review #4 (The Usual from Randy Robbins, Box 17131, Anaheim, California 92817-7131) It's been a while since the last issue but Randy has an unbeatable excuse; he had a heart transplant in 2008. This issue opens with an account of his hospital stay while awaiting a donor heart, followed by various reviews and a few cartoons by his young son.

Cherry Monocle #? (The Usual from Phlox Icona, 1215 Mississippi Avenue, Chatanooga, Tennessee 37405) Collage zine with a story about exercising for the endorphin addiction.

The Fossil #341 (US\$15 from The Fossils Inc, c/o Tom Parson, 157 South Logan, Denver, Colorado 80209) Devoted to the history of apa zines, with articles on zinesters of yore (including H.P. Lovecraft), reproductions of zines from a century ago, and a convention report from 1916.

Sugar Needle #34 (The Usual from Phlox Icona, 1215 Mississippi Avenue, Chatanooga, Tennessee 37405) Devoted to candy, particularly weird and foreign kinds. Who could be without Grapefruit Parrots, a Belgian Chocolate Caramel Crunch Truffle Popsicle, and d'Olivia bars (dried olives and white chocolate)?

Node Pajomo (2009 Summer) (US\$2 from the editor at Box 2632, Bellingham, Washington 98227-2632) Mini-zine that takes up where the late lamented GLOBAL MAIL left off. This is a requestzine, with listings by mail art projects and zines soliciting articles.

Probe #139 and #140 (The Usual from Science Fiction South Africa, Box 781401, Sandton 2146, South Africa) A nicely-produced SF clubzine in digest format, with club news and

various reviews.. Unlike most clubzines, it carries fiction by local authors.

BCSFazine #432 to #437 (\$3 from British Columbia SF Association, c/o Felicity Walker, 3851 Francis Road #209, Richmond, British Columbia V7C 1J6) SF clubzine with news of Canfandom, letters of comment, movie and book reviews, and listings.

Gar #41 (The Usual from Ross Priddle, 734 - 2 Avenue NW #402, Calgary, Alberta T2N 0E3) Collage art and random-word texts.

The Knarley Knews #133 to #135 (The Usual from Henry Welch, 18345 Skyline Blvd, Los Gatos, California 95033) Genzine, with essays on a San Diego animal park, the Columbian Exposition, assorted philosophical musings, and letters of comment.

Art Fiend #3 (The Usual from Jon Hart, Box 24003, Whitby, Ontario L1N 2L0) A collection of linocuts, mostly portraits.

Musea #169 to #171 (The Usual from Tom Hendricks, 4000 Hawthorne #5, Dallas, Texas 75219) Bad poetry, speculations of the evolution of life and what an ideal art museum would look like.

Jungle Radio #2 (The Usual from Heath Row, 101 Russell Street #4-R, Brooklyn, New York 11222) Apazine for ERBAPA, which is devoted to the works of Edgar Rice Burroughs. This issue discusses television adaptations of Tarzan.

Luna! #1 to #6 (The Usual from Christopher Carson, Box 1035, Fort Worth, Texas 76101) Single-sheet foolscap-size zine devoted to lunar exploration and colonization.

The Pterodactyl #1 (The Usual from James Dawson, Box 292, Malden, Washington 99149-0292) Apazine with assorted reviews and comments on the types of books and videos he collects.

Johnny America #7 (US\$5 from Moon Rabbit Drinking Club, Box 44-2001, Lawrence, Kansas 66044) Fictionzine with a selection of short stories.

Royal Swiss Navy Gazette #18 (The Usual from Garth Spencer, Box 74122, Vancouver, British Columbia V5V 3P0) Letters of comment, some fannish songs, and head-and-shoulders shots of his correspondents.

Banana Wings #38 and #39 (The Usual from Claire Brialey, 59 Shirley Road, Croydon, Surrey CR0 7ES, England) Substantial reading as always, with essays on SF fandom, convention reports

(traveling to one, chairing one, and Webcasting one), **-10-** and lots of letters of comment.

Going Postal #2 (The Usual from Kris Mininger, Calle Obispo 4B, Plasencia 10600, Caceres, Spain) Essays, interviews, and histories on zinedom and mail art.

Southern Fandom Confederation Bulletin V9#3 (The Usual from Southern Fandom Confederation, c/o Warren Buff, 2412F Still Forest Place, Raleigh, North Carolina 27607) SF clunzine with news and listings, convention reports, and letters of comment.

This Here ... #12 (The Usual from Nic Farey, Box 178, Saint Leonard, Maryland 20685) Articles on what the editor learned at the London School of Economics, NASCAR drivers, and letters of comment.

Alexiad V8#3 and #4 (The Usual from Lisa and Joseph Major, 1409 Christy Avenue, Louisville, Kentucky 40204-2040) Substantial zine with lots of book reviews, commentary, convention reports, and letters of comment.

Xeens And Things #21 (The Usual from James Dawson, Box 292, Malden, Washington 99149-0292) Reviews from the underground scene and lots of letters of comment.

Statement #366 and #367 (The Usual from Ottawa SF Society, 18 Norice Street, Ottawa, Ontario K2G 2X5) SF clubzine with lots of astronomy news, fandom events, and letters of comment.

Vanamonde #783 to #792 (The Usual from John Hertz, 236 S. Coronado Street #409, Los Angeles, California 90057) Single-sheet weekly apazine with SF fannish news, commentary, and letters.

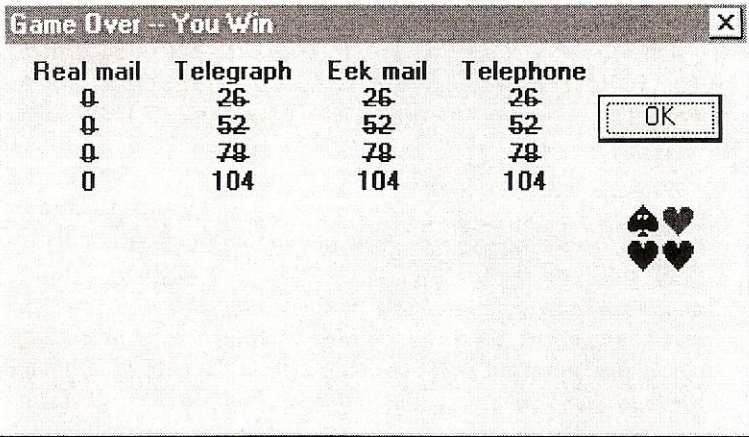
Spread #6 (The Usual from Jon Hart, Box 24003, Whitby, Ontario L1N 2L0) Collagezine with music and book reviews.

Xerography Debt #25 (US\$3 from Davida Gypsy Breier, Box 11064, Baltimore, Maryland 21212) Lots of zine reviews by multiple reviewers. A good resource for those wanting to connect with zinedom.

Zap!!omania #1 to #3 (The Usual from James Dawson, Box 292, Malden, Washington 99149) Spirit-duplicated zine, which takes me back, with conversations about zinedom and the Internet.

The Wild Analyst #4 (The Usual from Heath Row, 101 Russell Street #4-R, Brooklyn, New York 11222) Apazine for The Connection, an apa I haven't heard of before. This issue has a checklist of American political third parties and some commentary about analogue versus digital broadcasting.

No Sin But Ignorance #49 (Editorial whim from Claire Brialey, 59 Shirley Road, Croydon, Surrey CR0 7ES, England) Perzine with musings about SF fandom, what her life might have been had she taken a divergence, and letters of comment.



SEEN IN THE LITERATURE

noticed by Dale Speirs

Thomas, B.C. (2009) **Gamma-ray bursts as a threat to life on Earth.** INTERNATIONAL JOURNAL OF ASTROBIOLOGY 8:183-186

"Gamma-ray bursts (GRBs) are likely to have made a number of significant impacts on the Earth during the last billion years. The gamma radiation from a burst within a few kiloparsecs would quickly deplete much of the Earth's protective ozone layer, allowing an increase in solar ultraviolet radiation reaching the surface. This radiation is harmful to life, damaging DNA and causing sunburn. In addition, NO₂ produced in the atmosphere would cause a decrease in visible sunlight reaching the surface and could cause global cooling. ... A GRB within a few parsecs that is directed at the Earth will impact one hemisphere of the planet with a short, but intense blast of high-energy photons. Gamma-rays and X-rays are highly attenuated by the Earth's atmosphere. Therefore, the ground-level effects are primarily indirect. A small fraction of the incident energy reaches the ground as dangerous ultraviolet (UV) radiation, but this is limited in time to the duration of the event, which is at most tens of seconds for a long burst, and is less than a second for a short burst. While it is possible that this flash would affect some organisms, it seems unlikely that a biological catastrophe would

result from this effect alone. ... Using this approach, we find DNA damage of up to 16 times the annual global average of pre-burst values. This level of damage lasts a few months in some areas, particularly at mid-latitudes during the summer. ... It has been proposed that a GRB may have initiated the late Ordovician mass extinction. This proposal was based largely on the water-depth dependence of this extinction, which fits well with a radiation event, since UV is attenuated rather strongly in water and hence would affect organisms which dwell at the top of the water column more strongly than those that live towards the bottom." -12-

Sell, A., et al (2009) **Formidability and the logic of human anger.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 106:15073-15078

"Individuals with enhanced abilities to inflict costs (e.g., stronger individuals) or to confer benefits (e.g., attractive individuals) have a better bargaining position in conflicts; hence, it was predicted that such individuals will be more prone to anger, prevail more in conflicts of interest, and consider themselves entitled to better treatment. These predictions were confirmed. Consistent with an evolutionary analysis, the effect of strength on anger was greater for men and the effect of attractiveness on anger was greater for women. Also as predicted, stronger men had a greater history of

fighting than weaker men, and more strongly endorsed the efficacy of force to resolve conflicts, both in interpersonal and international conflicts. The fact that stronger men favored greater use of military force in international conflicts provides evidence that the internal logic of the anger program reflects the ancestral payoffs characteristic of a small-scale social world rather than rational assessments of modern payoffs in large populations."

Rongo, T., M. Bush and R. van Woesik (2009) **Did ciguatera prompt the late Holocene Polynesian voyages of discovery?** JOURNAL OF BIOGEOGRAPHY 36:1423-1432

"The famous Polynesian voyages characterized an intensive network of cultural exchange and colonization that was particularly active from ad 1000 to 1450. But, why would large groups of people leave their homelands to voyage into the unknown? Oceanic voyages are risky, albeit less so today than in the past. Landfalls were not guaranteed improvements over ports of departure. Taking the Cook Islands as an example, we ask whether harmful algal blooms that result in ciguatera fish poisoning in humans prompted past and present emigration pulses of peoples from within Polynesia. We take a multipronged approach to examine our hypothesis, involving: (1) archaeological evidence, (2) ciguatera fish poisoning reports since the 1940s, and (3) climate and temperature oscillations

using palaeodatasets. The archaeological records of fish bones and hooks show abrupt changes in fishing practices in post-ad 1450 records. Sudden dietary shifts are not linked to overfishing, but may be a sign of ciguatera fish poisoning and adjustment of fishing preference. While fishes form the staple diet of Polynesians, such poisoning renders fishes unusable. We show that ciguatera fish poisoning events coincide with Pacific Decadal Oscillations and suggest that the celebrated Polynesian voyages across the Pacific Ocean may not have been random episodes of discovery to colonize new lands, but rather voyages of necessity. A modern analogue (in the 1990s) was the shift towards processed foods in the Cook Islands during ciguatera fish poisoning events, and mass emigration of islanders to New Zealand and Australia."

Hoffecker, J.F. (2009) **The spread of modern humans in Europe.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 106:16040-16045

"The earliest credible evidence of Homo sapiens in Europe is an archaeological proxy in the form of several artifact assemblages (Bohunician) found in South-Central and possibly Eastern Europe, dating to =48,000 calibrated radiocarbon years before present (cal BP). They are similar to assemblages probably made by modern humans in the Levant (Emiran) at an earlier date and apparently represent

a population movement into the Balkans during a warm climate interval [Greenland Interstadial 12 (GI 12)]. A second population movement may be represented by a diverse set of artifact assemblages (sometimes termed Proto-Aurignacian) found in the Balkans, parts of Southwest Europe, and probably in Eastern Europe, and dating to several brief interstadials (GI 11–GI 9) that preceded the beginning of cold Heinrich Event 4 (HE4) (~40,000 cal BP). They are similar to contemporaneous assemblages made by modern humans in the Levant (Ahmarian). The earliest known human skeletal remains in Europe that may be unequivocally assigned to *H. sapiens* (Peștera cu Oase, Romania) date to this time period (~42,000 cal BP) but are not associated with artifacts. After the Campanian Ignimbrite volcanic eruption (40,000 cal BP) and the beginning of HE4, artifact assemblages assigned to the classic Aurignacian, an industry associated with modern human skeletal remains that seems to have developed in Europe, spread throughout the continent."

Grehan, J.R., and J.H. Schwartz (2009) **Evolution of the second orangutan: phylogeny and biogeography of hominid origins.** JOURNAL OF BIOGEOGRAPHY 36:1823-1844

"Humans and orangutans share a common ancestor that excludes the extant African apes. Molecular analyses are compromised by phenetic procedures such as alignment and are probably based on

primitive retentions. We infer that the human-orangutan common ancestor had established a widespread distribution by at least 13 Ma. Vicariant differentiation resulted in the ancestors of hominids in East Africa and various primarily Miocene apes distributed between Spain and Southeast Asia (and possibly also parts of East Africa). The geographical disjunction between early hominids and Asian *Pongo* is attributed to local extinctions between Europe and Central Asia."

Strimling, P., et al (2009) **Repeated learning makes cultural evolution unique.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 106:13870-13874

"Although genetic information is acquired only once, cultural information can be both abandoned and reacquired during an individual's lifetime. Therefore, cultural evolution will be determined not only by cultural traits' ability to spread but also by how good they are at sticking with an individual ... Here we show that repeated learning and multiple characteristics of cultural traits make cultural evolution unique, allowing dynamical phenomena we can recognize as specifically cultural, such as traits that both spread quickly and disappear quickly. Importantly, the analysis of our model also yields a theoretical objection to the popular suggestion that biological and cultural evolution can be

understood in similar terms. We find that the possibility to predict long-term cultural evolution by some success index, analogous to biological fitness, depends on whether individuals have few or many opportunities to learn. If learning opportunities are few, we find that the existence of a success index may be logically impossible, rendering notions of "cultural fitness" meaningless. On the other hand, if individuals can learn many times, we find a success index that works, regardless of whether the transmission pattern is vertical, oblique, or horizontal."

Deatona, A., and R. Arora (2009) **Life at the top: The benefits of height.** ECONOMICS AND HUMAN BIOLOGY 7:133-136

"According to the Gallup-Healthways Well-Being Index daily poll of the US population, taller people live better lives, at least on average. They evaluate their lives more favorably, and they are more likely to report a range of positive emotions such as enjoyment and happiness. They are also less likely to report a range of negative experiences, like sadness, and physical pain, though they are more likely to experience stress and anger, and if they are women, to worry. These findings cannot be attributed to different demographic or ethnic characteristics of taller people, but are almost entirely explained by the positive association between height and both income and education, both of which are positively linked to better lives."

Hamilton, M.J., et al (2009) **Population stability, cooperation, and the invasibility of the human species.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 106:12255-12260

"The biogeographic expansion of modern humans out of Africa began ~50,000 years ago. This expansion resulted in the colonization of most of the land area and habitats throughout the globe and in the replacement of preexisting hominid species. However, such rapid population growth and geographic spread is somewhat unexpected for a large primate with a slow, density-dependent life history. Here, we suggest a mechanism for these outcomes by modifying a simple density-dependent population model to allow varying levels of intraspecific competition for finite resources. Reducing intraspecific competition increases carrying capacities, growth rates, and stability, including persistence times and speed of recovery from perturbations. Our model suggests that the energetic benefits of cooperation in modern humans may have outweighed the slow rate of human population growth, effectively ensuring that once modern humans colonized a region long-term population persistence was near inevitable. Our model also provides insight into the interplay of structural complexity and stability in social species."

Prideaux, G.J., et al (2009) **Extinction implications of a chenopod browse diet for a giant Pleistocene kangaroo.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 106:11646-11650

"Kangaroos are the world's most diverse group of herbivorous marsupials. Their diversity peaked during the Pleistocene, but by approximately 45,000 years ago, 90% of larger kangaroos were extinct, along with a range of other giant species. Here we combine craniodental morphology, stable-isotopic, and dental microwear data to reveal that the largest-ever kangaroo, Procoptodon goliath, was a chenopod browse specialist, which may have had a preference for Atriplex (saltbushes), one of a few dicots using the C4 photosynthetic pathway. Furthermore, oxygen isotope signatures of P. goliath tooth enamel show that it drank more in low-rainfall areas than its grazing contemporaries, similar to modern saltbush feeders. Saltbushes and chenopod shrublands in general are poorly flammable, so landscape burning by humans is unlikely to have caused a reduction in fodder driving the species to extinction. Aridity is discounted as a primary cause because P. goliath evolved in response to increased aridity and disappeared during an interval wetter than many it survived earlier. Hunting by humans, who were also bound to water, may have been a more decisive factor in the extinction of this giant marsupial."

Sisodia, M.S. (2009) **Impact during the Proterozoic era possibly inundated the earth with phosphorus.** INTERNATIONAL JOURNAL OF ASTROBIOLOGY 8:187-191

"The stromatolites of the Precambrian Aravalli Supergroup outcropping around Udaipur, Rajasthan, India are classified into two distinct lithofacies: the older carbonate stromatolites facies and the younger phosphate-bearing stromatolite facies. Phosphate-bearing stromatolites of the same age have been reported from China, Russia and Australia. The phosphate-bearing stromatolites of Udaipur show fossil cyanobacteria. These cyanobacteria grew luxuriantly in the absence of any competitors and accumulated abnormal amounts of phosphorus from the novo phosphorus-rich environment, eventually forming a workable phosphate deposit owing to their post-mortem alteration. There is a sharp and abrupt contact between the two facies. It is therefore argued that the diastem noted between carbonate and phosphate-bearing stromatolites is possibly due to an impact that inundated the Earth with phosphorus. Phosphorus is a key constituent of proteins, which are the major repository of chemical energy for metabolism. Its abundance after this event triggered the emergence of new advanced species."