OPUNTIA

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THE EXCITING TRIP OF PROFESSOR LOWE

by Dale Speirs

Introduction.

Professor Thaddeus Lowe was a pioneer balloon enthusiast in the USA during the 1860s. He helped form the first aerial corps of the Union Army in late 1861, although he had constant trouble from hidebound generals who saw no value in aerial reconnaissance [1]. His aerial adventures almost came to grief in April 1861, when his balloon Enterprise landed in the wrong place at the wrong time.

Lowe began his balloon flight in Cincinnati, Ohio, on April 20, 1861. He departed in the early morning, carrying with him several copies of that day's newspaper, the CINCINNATI COMMERCIAL, although no regular mail was carried. Lowe's intended destination was the eastern coast, preferably in the vicinity of Washington, D.C., but instead the winds shifted. The balloon went to the southeast, traveling over Kentucky, Virginia, North Carolina, and finally into the northwest corner of South Carolina. His flight lasted nine hours, until he landed just west of Unionville, South Carolina [2]. He was then arrested by the locals as a Union spy.

An Eyewitness Account.

I recently purchased a letter written by an eyewitness to the landing, sent to his brother. I saw it in an American postal history auction in 2007, and bid US$700 for it, because I am investing in quality philatelic material. There was also the fact that the letter told a very interesting story, which makes postal history such an enjoyable hobby.

The letter is a sheet of lined blue paper, folded once to make four pages. It is dated April 28 in the letter, but has a manuscript cancel of May 1, and was sent from Moutrie to Golden Grove, both in South Carolina. After the letter was written, it was folded into an envelope shape such that the first page was the outside of the cover with the address, and the next three were the text of the letter inside. Most of the letter is devoted to personal matters. The relevant passages are as follow. The writer seems to have mis-remembered the date.

[page 2]
Perhaps you have seen an account of the balloon man that came down on Saturday the 21st April near my mill. He lit on the hill the other side of creek. Bi?? H?????? Taylor and others conversed with him. He left Cincinnati, Ohio, 3 o'clock that morning, lit at Lewisville, Kentucky, about sunup and then near my mill about 2 o'clock.

I happened at my mill just as he was ascending in the air. He came right over my head as he was his balloon. Was large, I think some 50 ft. in height, about 44 ft in circumference. He rode in a neat ???? basket or case under the balloon. His height was 4 miles before he was out of sight. He lit again at Union County and took the case with his balloon to Charleston. His name is Professor Lowe.

[page 3]
I never heard as many tales in my life as has been told about this balloon. Some says it was old Lincoln, others it was Christ. There was about 30 or 40 present when he lit. Some shouting, praying, hollering, etc. I calmed many of them and told them there was no danger.

A Hot Time For The Professor.

Eight days earlier, the War Between the American States had begun when Confederate forces fired on Fort Sumter. Two days before he had started his flight, Virginia had seceded. It is not surprising that Lowe received an uncomfortable reception from the local inhabitants. Some historians contend that Lowe was the war's first P.O.W., but that couldn't be since he wasn't a military man in uniform. He was arrested as a Union spy because he was in civilian clothes, a far more dangerous situation because spies can be summarily executed.

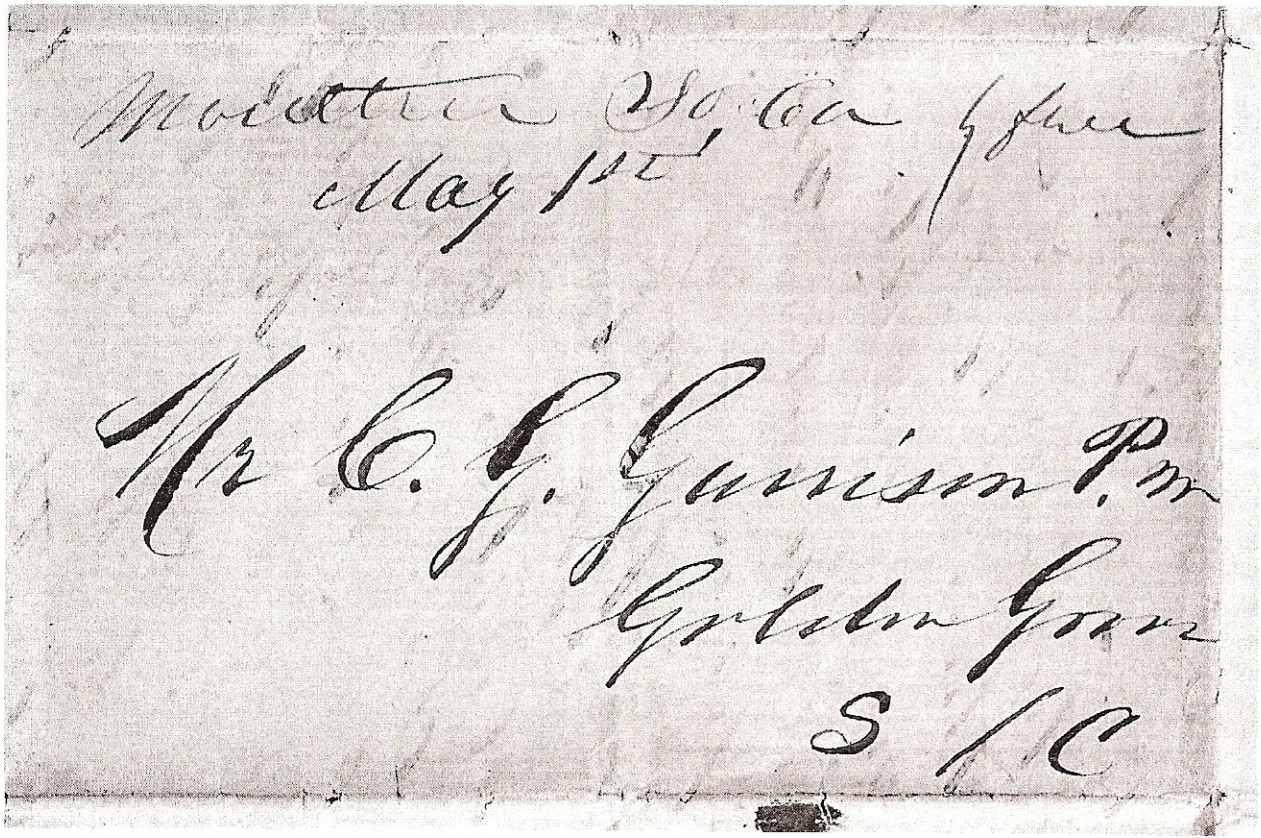


Figure 1: The cover of the letter describing Professor Lowe's landing.

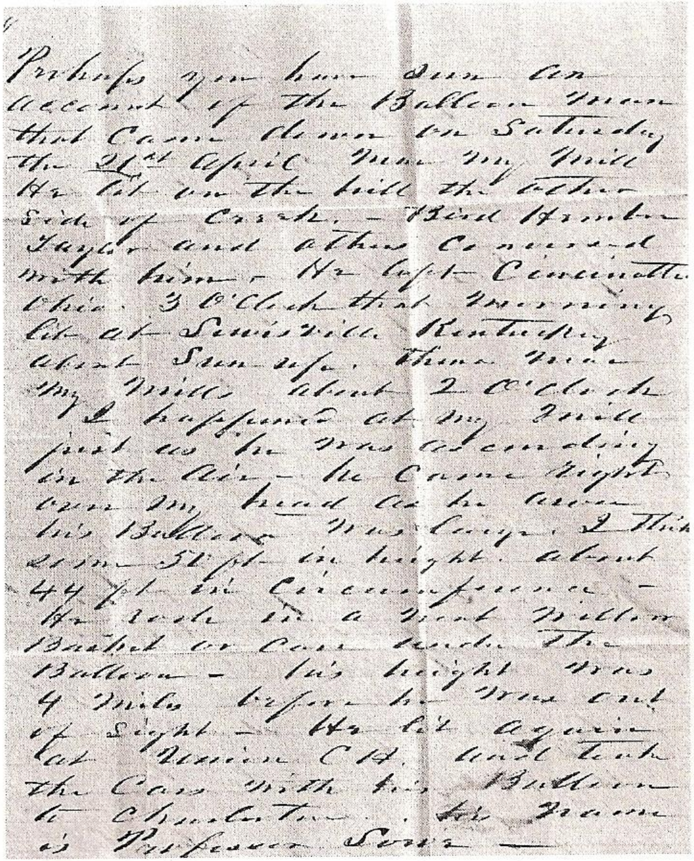
The letter was sent free (note the marking in the upper right corner) since it was addressed to a postmaster, the writer's brother (note the initials P.M. after his name)

Lowe managed to convince the Confederates that he was a man of science by showing them the newspapers, and was allowed to leave after a brief period of house arrest. It was a narrow escape for him indeed!

References.

1] Anonymous (1861-11-09) Prof. Lowe's balloons. NEW YORK TIMES, page 1

2] Squires, J.D. (1937) Aeronautics in the Civil War. AMERICAN HISTORICAL REVIEW 42:652-669



Perhaps you have seen an
account of the Balloon man
that Came down on Saturday
the 21st April near my Mill
He lit on the hill the other
side of Creek. — Bird Hamber
Taylor and others Conversed
with him. He left Cincinnatti
Ohio 3 O'Clock that morning
lit at Lewisville Kentucky
about Sun up, then near
my mills about 2 O'Clock
& I happened at my mill
just as he was ascending
in the Air — he Came right
over my head as he arose
his Balloon was large I think
some 51 ft in height. about
44 ft in Circumference —
He rode in a neat willow
Basket or Car under the
Balloon — his height was
4 miles before he was out
of sight — He lit again
at Union C.H. and took
the Cars with his Balloon
to Charleston. His name
is Professor Lowe —

Figure 2: The second page of the letter, which starts off by describing the visit of the balloon man.

RUBBER STAMP NEWS

Cowtown is at the forefront of rubber stamping and the latest proof is that on September 20, 2010, a rubber stamp the size of a coffee table was received at the Calgary office of the Energy Resources Conservation Board. The rubber stamp read "Approved" and was a gift from Greenpeace, which surprised me because their main activity is scaling buildings and putting up banners protesting something or other.

The rubber stamp was in protest of the ERCB's upcoming review of an application by the French oil company Total for a new tar sands mine in Athabasca, which Greenpeace says will be rubberstamped (in the figurative sense) by the Board. Since the whole idea of the ERCB is to control Alberta's energy development, Greenpeace seems to be missing the point. It is like complaining that Revenue Canada collects taxes or the army goes around blowing up things.

THE BILLION-DOLLAR RARE-EARTH MINING CLUB

by Jack Lifton

[*Editor's note: Rare earths are a group of elements essential for modern electromagnets, batteries, and electronics. China currently has a near-monopoly on rare earth supplies because they began planning for it a couple of decades ago while North Americans were busy telling each other that the Internet was the future and bricks-and mortar companies didn't matter anymore. The rare earth situation has triggered a mad rush to find new mines elsewhere, although none are yet currently operating. A lot of uncritical gush has been written about rare earths as the next big thing for investors. Lifton is a man who has the details, and they are not pretty.*]

The Australian rare-earth expert commentator Dudley Kingsnorth stated at the 6th Annual Chinese Society for Rare Earths Summit on August 3, 2010, that he estimated the total value of all of the rare-earth ore concentrates produced in the last calendar year to be south of US$1 billion. Let me point out here that it does not matter what the selling price of high-purity rare-earth metals may be, or may jump to, when you are valuing the ore concentrates from which they are produced. The value of the ore concentrates will rise much less than the price of the high-purity individual metals, because it is post-ore concentration where most of the added costs arise.

If you believe, as I do, that the total demand for rare earths will no more than double in the next decade, then it is obvious that we are faced with a mining industry expansion which has probably too many new entrants competing to recover their cost of investment, from a relatively small total revenue pool. This means that there are already too many new entrants, and if all of them raise the necessary capital they believe they need, then some strategic investors will never see any profit. Besides the problem of too many competitors chasing too small a pool of money, there is the problem that not all rare earths are as desirable as the others.

The most valuable rare earth in terms of total demand and total revenue, is the metal neodymium, the basis of 90% of the world's rare-earth permanent magnets. Its price as a high-purity metal has been climbing lately, and almost all of the projected balance sheets and income statements of the rare-earth mining ventures are based on neodymium's current high price. But common economic sense and the basic law of supply and demand tell us that if neodymium is overproduced, then its price at every point in the value chain will fall. If this happens, many of the business models of the members of the 'billion-dollar cost club' will fail to show a profit, no matter where in the value chain they are calculated.

The other economic curiosity among rare-earth mining ventures, is the belief by many of the miners that if they produce large quantities of the currently-highest-priced rare earths with commercial uses, the so-called heavy rare earths dysprosium and terbium, then the prices of those metals will stay high no matter what the excess of supply over demand might be. This is plain silly and misleading. I have come to the conclusion that in rare-earth mining, outside of China, small is beautiful and the higher the proportion of heavy rare earths to total rare earths, the better for any venture.

There is no way that a non-Chinese rare-earth mine will be able to outproduce the Chinese mines in Inner Mongolia, in total production of either neodymium or lanthanum, the two most widely used of all of the rare-earth metals; but even the Chinese believe that they will not be able to meet the demand for dysprosium and terbium beyond this decade.

If the demand for dysprosium and terbium doubles, then there will be a major shortage of dysprosium and terbium beginning by 2015. I am betting that Chinese, Japanese and Korean investors will focus on neodymium and, perhaps, lanthanum only in the short term, but on dysprosium and terbium for the long term.

WHY RARE EARTHS MATTER

by Dale Speirs

It is politically correct to encourage wind power. The USA, as part of one of its many stimulus programmes, encouraged wind turbines "because it would create jobs". The jobs were mostly for crane operators lifting the turbines into place, and translators converting the instruction manuals from Chinese into English, because the electromagnets that generate the electricity and the controlling computer circuits were all made in China. The Chinese have reduced exports of rare earths and insist that any manufacturer who wants to use them build their factory in China.

Your computer screen or television set use rare earths as pigments. Anything that depends on magnets, such as the starter on your car engine, has rare earths in it. The American military has suddenly realized that they should be stockpiling rare earths, because all the electronics in their planes, drones, and optics depend on the stuff. The demand for electric cars, if it ever takes off, will also increase the demand for rare earths. All those cars recharging at night will require new generating plants be built to add electrical capacity, and generators are essentially big spinning magnets. It doesn't matter if the additional power supplies are from wind, nuclear, coal, or hydro, all of them produce electricity by spinning magnets with moving air, steam, or water.

I have been doing a lot of research trying to find investment opportunities in rare earths. They are not like gold or silver, which are easy to invest in just by going to your local coin shop. Mining stocks are slightly less risky than buying mortgage derivatives, aka toxic paper. Essentially there is nothing out there for a retail investor. That doesn't stop pundits from plugging up the blogs by touting mines that are always just on the verge of producing but never do. Others are completely clueless and simply state that everyone should have rare earths as x% of their portfolio without specifying actual details.

Not all rare earths are in equal demand, as Lifton pointed out in the article above. Further, as he mentions, it is not enough to find the ore, but one must also separate it and refine it, something that can't be done with a backyard foundry. What will undoubtedly happen is that investors will buy into the wrong kind of rare earth mines. These mines will also not be able to refine the rare earths to customer satisfaction at a profitable price.

From there, let me jump to hard science fiction, the techno kind where street punks can hack any corporation computer in minutes but live in squalor, and engineers can spot-weld bus bars with a cigarette lighter and some tinfoil. Much of hard SF is just fantasy with rivets instead of robes and hoods.

As much as I like hard science fiction, I have always been annoyed at how SF authors hand wave their way past things such as who augers out plugged sewers in a starship, or how people are paid or otherwise motivated to clean out sewers. Rare earths would definitely be a concern for any starfaring society, and they are not anymore abundant in asteroids or exoplanets than on Earth. I daresay that any one starship would probably use more rare earths than all previous uses combined.

There is, of course, the old wheeze of using the hitherto unknown element of unobtainium, as in the movie THE CORE. Asteroids are often considered the last best hope of the mining industry, but enough is known of them to realize that they will never be economical to mine. Even in our time, it is not the ore body that determines the success of a mine, it is the cost of transport and refining. There are many mines in the Arctic that would shut down without ice roads in the winter to do the heavy hauling at a reasonable cost, and many untapped deposits in the swamps and jungles of the world that no road can be built to. And those are just for massive ore bodies; rare earth mines are small and quickly depleted on average. Like oil, it is not the size of the reserves that matters, it is the cost of production.

If there are rare earths Out There, the delta vector costs will make them uneconomical. We will go out into space, but slowly, and with small spacecraft or robot probes, not 400-passenger starships.

JOHNSON'S PROLOGUE CONSIDERED AS SCIENCE FICTION

by Dale Speirs

I was reading an anthology of essays on Samuel Johnson (1709-1784) and came across his poem "Prologue at the Opening of the Theatre in Drury Lane, 1747". This poem was written for Johnson's friend David Garrick on the occasion of the latter opening his new theatre in London, England, in September 1747. The poem covers the history of theatre in England from the past to the present of Johnson's time to the unimaginable future of our time 250 years later. As I went through it, I was struck by the commentary in it that might well be applied to science fiction. Science fiction was unknown in Johnson's time, although fantasy was known well enough, and science fact itself was still struggling its way out of the chrysalis of natural philosophy. The poem begins with Shakespeare:

"When Learning's triumph o'er her barb'rous foes
First reared the stage, immortal Shakespeare rose;
Each change of many-coloured life he drew,
Exhausted worlds, and then imagined new:
Existence saw him spurn her bounded reign,
And panting Time toiled after him in vain:
His pow'rful strokes presiding truth impressed,
And unresisted passion stormed the breast."

Substitute the name of a good SF writer (your choice, please) for Shakespeare's, and one will have a fair description of the responsibility and obligation of writing SF. Good SF, that is. Not media SF where spaceships zigzag in combat like WW2 fighter planes in defiance of orbital dynamics and fuel versus delta vector calculations. That is an exhausted world, written by those who cannot imagine new. They who write fantasy novels about some lad or lass on a quest to overthrow an evil monarch or to seek the Sacred Knicknack of Qwerty prefer to stay well within the bounded reigns.

The next verse discusses Ben Jonson:

"*Then Jonson came, instructed from the school,*
To please in method, and invent by rule;
His studious patience, and labourious art,
By regular approach essayed the heart;
Cold approbation gave the ling'ring bays,
For those who durst not censure, scarce could praise.
A mortal born he met the general doom,
But left, like Egypt's kings, a lasting tomb."

A journeyman SF writer, in other words. A steady seller in the publishers' midlists. An author like Andrew Harmin, Tom Holt, Terry Pratchett, or Piers Anthony, selling steadily on name recognition but with no powerful strokes impressing truth.

"*The wits of Charles found easier ways to fame,*
Nor wished for Jonson's art, or Shakespeare's flame;
Themselves they studied, as they felt, they writ,
Intrigue was plot, obscenity was wit.
Vice always found a sympathetic friend;
They pleased their age, and did not aim to mend.
Yet bards like these aspired to lasting praise,
And proudly hoped to pimp in future days.
Their cause was gen'ral, their supports were strong,
Their slaves were willing, and their reign was long;
Til shame regained the post that sense betrayed,
And Virtue called oblivion to her aid."

The trendy and the bestsellers. New Wave SF, mercifully called to oblivion, kept readers baffled by substituting obscurity for plot and adding obscenity as if it were wit. Obscenity is almost never wit, although stand-up comedians can always get laughs with it from the drunks in the audience at nightclubs. The only person who ever demonstrated good use of obscenity as wit was George Carlin in his routine "Seven Words You Can Never Say On Television". Vice always finds a sympathetic friend because it sounds cool and the effects don't catch up with the victim for awhile. Fortunately, as Johnson mentions, the bestsellers of this kind soon vanish into oblivion. Stephen King is one of a long line of authors dominating the bookstores in his time, then vanishing by the next generation despite selling millions.

Media SF may aspire to future praise, but is mostly substituting special effects for plot and characterization. Television and movies have had a long reign, and their slaves are still willing. B-movies are given the same emphasis as 2001: A SPACE ODYSSEY. Television pleases only the current age, in quest of ratings. Its flow of content pours by, so fast that the trivial and the significant blur together. STAR TREK aspires to lasting praise; books are published on its future perfect as if "Live long and prosper" was serious philosophy and not a trivial epigram.

"*Then crushed by rules, and weakened as refined,*
For years the power of tragedy declined;
From bard, to bard, the frigid caution crept,
Til declamation roared, while passion slept.
Yet still did Virtue deign the stage to tread,
Philosophy remained, though Nature fled.
But forced at length her antient reign to quit,
She saw great Faustus lay the ghost of wit:
Exulting Folly hailed the joyful day,
And pantomime, and song, confirmed her sway."

Hollywood and the New York City publishers always want something new and different, as long as it is like the last big thing. Frigid caution creeps from movie screen to movie screen, with crushing rules that insist starships must make an audible sound as they whiz by in space. Ten-volume fantasy trilogies must have wizards either incompetent bunglers or pure evil.

The message is always that if you wish hard enough in something, it will come true. At one time you had to at least clap your hands, but that was weakened to where all you have to do is let the Force be with you. In real life, of course, wishing doesn't make a thing so. Someone still has to crawl under the machinery and re-wire the circuits.

"*But who the coming changes can presage,*
And mark the future periods of the stage?
Perhaps if skill could distant times explore,
New Behns, new Durfeys, yet remain in store.
Perhaps, where Lear has raved, and Hamlet died,
On flying cars new sorcerers may ride.
Perhaps, for who can guess the effects of chance?
Here Hunt may box, or Mahomet may dance."

Johnson was practical enough to realize that prophecy is laughable to future generations riding on flying cars. He correctly realizes that chance makes the future unguessable. The future of theatre is unknowable. No one could have imagined that a canceled television show of the 1960s would turn into a billion-dollar industry because of Trekkies. No one in 1980 could have imagined that the Internet would become a multi-billion dollar industry, and that every television show and movie would have its own Web site.

"Hard is his lot, that here by fortune placed,
Must watch the wild vicissitudes of taste;
With every meteor of caprice must play,
And chase the new-blown bubbles of the day.
Ah! let not censure term our fate our choice,
The stage but echoes back the public voice.
The drama's laws the drama's patrons give,
For we that live to please must please to live."

In short, ratings and box office takings are still the motivating forces behind performing arts. SF movies and television shows must please to live. The actors are only as famous as their last hit, and if they fail to watch the wild vicissitudes of fate, are condemned to oblivion or at best cult status. Johnson suggests, hopefully and hopelessly, that better performances are within the responsibility of the theatre-goers:

"Then prompt no more the follies you decry,
As tyrants doom their tools of guilt to die;
'Tis yours this night to bid the reign commence
Of rescued Nature, and reviving Sense;
To chase the charms of sound, the pomp of show,
For useful mirth, and salutary woe;
Bid scenic virtue form the rising age,
And Truth diffuse her radiance from the stage."

THE HISTORY OF MAIL BOMBS REDUX

Ken Sanford, who edited my recent book on mail bombs, has advised me that the first printing sold out and the book has gone back to press. Very flattering news to read!

This 128-page softcover book, with 60 colour pages, provides a complete history of letter and package bombs. It gives a history and background of all types of mail bombs and the people who sent them. Many different types of letter bombs are shown and described, as well as the various types of markings and labels used by postal authorities to indicate that a letter or package has been inspected to check against bombs or chemicals, such as anthrax.

The book is available for US$37.50 or UK£26.00 plus postage. Postage within the USA is US$3.00 (media mail), to Canada is US$6.00 (1st class), and to the rest of the world is US$13.45 (Global Priority Mail). Payment may be made by US$ cheque or money order made payable to Ken Sanford, or by PayPal to: kaerophil@gmail.com. For PayPal payments, please add $1.75. For orders in UK£, please inquire on postage and payment. Mail orders from: Ken Sanford, 613 Championship Drive, Oxford, Connecticut, USA 06478-3128.

DO NOT order from Dale Speirs. He has no copies for sale; the Wreck and Crash Mail Society is handling all sales.

Raia, P., F. Carotenuto, and S. Meiri (2010) **One size does not fit all: no evidence for an optimal body size on islands.** GLOBAL ECOLOGY AND BIOGEOGRAPHY 19:475-484

"*Optimal body size theories predict that large clades have a single, optimal, body size that serves as an evolutionary attractor, with the full body size spectrum of a clade resulting from interspecific competition. Because interspecific competition is believed to be reduced on islands, such theories predict that insular animals should be closer to the optimal size than mainland animals. We used body sizes and a phylogenetic tree of 4004 mammal species, including more than 200 species that went extinct since the last ice age. We tested, in a phylogenetically explicit framework, whether insular taxa converge on an optimal size and whether insular clades have narrow size ranges. We found no support for any of the predictions of the optimal size theory. No specific size serves as an evolutionary attractor. We did find consistent evidence that large (> 10 kg) mammals grow smaller on islands. Smaller species, however, show no consistent tendency to either dwarf or grow larger on islands. Size ranges of insular taxa are not narrower than expected by chance given the number of species in their clades, nor are they narrower than the size ranges of their mainland sister clades, despite insular clade members showing strong phylogenetic clustering.*"

Speirs: That is to say, humans stranded on an island will not necessarily devolve into hobbits, nor will sand crabs grow up to be the size of houses.

Buldyrev, S.V., et al (2010) **Catastrophic cascade of failures in interdependent networks.** NATURE 464:1025-1028

"A fundamental property of interdependent networks is that failure of nodes in one network may lead to failure of dependent nodes in other networks. This may happen recursively and can lead to a cascade of failures. In fact, a failure of a very small fraction of nodes in one network may lead to the complete fragmentation of a system of several interdependent networks. A dramatic real-world example of a cascade of failures ('concurrent malfunction') is the electrical blackout that affected much of Italy on 28 September 2003: the shutdown of power stations directly led to the failure of nodes in the Internet communication network, which in turn caused further breakdown of power stations. Here we develop a framework for understanding the robustness of interacting networks subject to such cascading failures. We present exact analytical solutions for the critical fraction of nodes that, on removal, will lead to a failure cascade and to a complete fragmentation of two interdependent networks. Surprisingly, a

broader degree distribution increases the vulnerability of interdependent networks to random failure, which is opposite to how a single network behaves."

Speirs: We'll all go together when we go. Just remember that when next you hear some politician pontificating about how a smart grid will make power blackouts a thing of the past.

Healya, A.J., N. Malhotrab, and C.H. Mob (2010) **Irrelevant events affect voters' evaluations of government performance.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 107:12804-12809

"*To precisely test for the effects of irrelevant information, we explore the electoral impact of local college football games just before an election, irrelevant events that government has nothing to do with and for which no government response would be expected. We find that a win in the 10 days before Election Day causes the incumbent to receive an additional 1.61 percentage points of the vote in Senate, gubernatorial, and presidential elections, with the effect being larger for teams with stronger fan support. In addition to conducting placebo tests based on post-election games, we demonstrate these effects by using the betting market's estimate of a team's probability of winning the game before it occurs to isolate the surprise component of game outcomes. We corroborate these aggregate-level results with a survey that we conducted during the 2009 NCAA men's college basketball tournament, where we find that surprising wins and losses affect presidential approval. An experiment embedded within the survey also indicates that personal well-being may influence voting decisions on a subconscious level. We find that making people more aware of the reasons for their current state of mind reduces the effect that irrelevant events have on their opinions. These findings underscore the subtle power of irrelevant events in shaping important real-world decisions and suggest ways in which decision making can be improved.*"

Speirs: In the recent October elections, Calgary elected Naheed Nenshi, a Muslim, as mayor, while Toronto chose a right-wing middle-aged white guy for their mayor. Most annoying for the eastern pundits who assumed that it would be the other way around because Toronto voters are much more enlightened than us oil-drilling rednecks, and who seldom admit that Prime Minister Stephen Harper, although representing a Calgary riding, is actually a native son of Toronto. That voters are swayed by irrelevant factors is nothing new. If the Argentinians hadn't invaded the Falkland Islands, then Margaret Thatcher wouldn't have been re-elected. While not disagreeing with this paper, it overlooks the point that in two-party countries such as the USA, there is no practical difference between the two parties, so voter influences are irrelevant.

LETTERS TO THE EDITOR
[Editor's remarks in square brackets.]

FROM: Lloyd Penney 2010-04-19
1706 - 24 Eva Road
Etobicoke, Ontario M9C 2B2

Mail art hasn't really caught my attention, mostly because I think I'd like more of a publication. A piece of mail art doesn't have enough of a message for me.

Gold is around an amazing US$1,100 an ounce, which makes it an expensive investment, but is it a good one? Even buying a half-ounce or quarter-ounce Maple Leaf may be out of the reach of many citizens with little money to invest. With most banks offering no interest and too many ways for them to bleed a few dollars a month out of your account because of assorted service charges, more and more stuffing cash under your mattress is looking to be a wise way of saving money.

[The people who didn't buy gold at $1,100 "because it is too expensive" didn't buy it when it was $500 a few years ago "because it is too expensive", and won't buy it if the price drops down again "because it is losing value". Since currencies in both the USA and Canada are depreciating at about 4% a year because of hidden inflation (the official figures are rigged to come in lower; visit www.shadowstats.com), this means that staying in cash under the mattress will cost you $4 a year for every $100 you stash. Don't sweat the daily price fluctuations, which are actually the depreciation in currencies.]

I had plans for an e-zine but some of the reactions to a national fannish newszine ranged from indifference to veiled hostility. I still want to do a zine, but I'd like to find a focus for it, a reason to do it. I could do it anyway but I expect it would turn into a chore. I am still pretty happy in the letter column, and the feedback is generally positive.

[E-zines have been displaced by blogs. My observation of Canadian fandom is that it is atomized in both time and space. Canuck fans are not interested in what happened in the past, or what is happening in other cities today. Most are not even interested in what is happening in their own cities if it is some special interest group outside their own. The browncoats don't talk to the Trekkies, and the steampunks consider sexy-teenage-vampires-in-love to be passé. It was ever thus.]

When I write letters of comment, I mail them to you and place them into my online archive on my LiveJournal account. I've been doing this for four years, and to me it shows the amount of writing I've been doing. I've had lots of positive feedback until recently, when I foolishly mentioned it on the Trufen list. Several

of the older fans flamed me good over it and called into question my character. Interesting how they never noticed what I was doing until I pointed it out to them, which shows me they certainly never knew that archive was there. They say I am bypassing the fan editor and fanzine itself, and publishing the letter before the fan editor can, a horrible, terrible crime to hear them speak of it. I merely wished to archive my writings. Does doing this offend you or bother you to any degree? These folks fell just short of ordering me to stop this immoral practice. What say you?

[Employers or authorities doing an Internet search may come across these letters if they are name-checking someone whom you mention. An advantage of the Papernet is that there are no search engines and unless a boss or the police know the zine exists and somehow manage to locate a physical copy, your writings are relatively safe with the in-group you are writing for. Employers are getting smart about Googling their own names, so you should be careful about mentioning your employers, even innocently. What if someone at the Law Society of Upper Canada or the Globe & Mail comes across your name?]

[I have been scanning back issues of OPUNTIA in non-OCR readable pdf format. I grumble about the Internet, but recognize that the current generation will prevail, so therefore years from now I will post all the back issues. However, an Internet search will not pull up the names of letter writers because the scans are converted from jpegs and are not machine readable. A boss doing a Google search would not find your name; they would have to individually page through every issue and read it off the screen, assuming they knew that you had written for OPUNTIA.]

FROM: Joseph Nicholas 2010-09-24
15 Jansons Road
Tottenham, London, England N15 4JU

[Re: an advocacy campaign for lunar colonization] What I find particularly absent is any awareness of, or a willingness to face up to and try to overcome, the lack of political will to deliver a lunar colony. The claim to establish a fully functioning lunar colony of 120 people and keep it there for a single down-payment of $50 billion demonstrates the sheer unworldliness of the argument. If Dubya's Constellation programme to return humans to the Moon was cancelled by the Obama administration because it was considered too expensive at $9 billion, then what chance is there for a programme costed at $50 billion?

[None, unless a Wall Street bank decides to use its petty cash account to fund the project. In these days of trillion-dollar bailouts, a billion isn't what it used to be.]

We are offered the argument that it will happen simply because the technology for it is available, which inverts the process. There will not be widespread public support for a lunar colony unless it is first demonstrated how and why it will change people's lives for the incomparably better, and thus build for the project a constituency that by its very size will force governments to respond. Without their buy-in, nothing will happen.

[Or, alternatively, China lands men on the Moon and declares its intent to mine it for commodities, in which case the Americans and Russians will throw their resources into a new space race.]

Private enterprise will not step forward to fill this gap, because of the enormity of the costs. The most that private enterprise will be willing to invest in is projects with guaranteed and/or short-term returns, such as remote imaging, weather forecasting, and global communications. There may indeed be exotic minerals in the lunar regolith, but how many decades will investors have to wait for their potential dividend? A dividend which may never be paid if the sale prices don't cover the cost of mining it, or if there is no widespread use for the minerals in question?

[One method around this problem would be to allow space companies to issue flow-through shares. Canada has the largest mining sector in the world because the government allows miners and petroleum companies to issue these shares, and as far as I know, is the only country that does. Because it takes five to ten years to bring a mine on-stream, companies pile up huge expenses but have no income to deduct them against. Flow-through shares allow the companies to pass on these tax deductions to shareholders, who can then apply them against their own income for considerable tax savings. This encourages people to buy shares and get a benefit without the long wait for income. It works for mines and could work for space exploration.]

Some will point to Richard Branson and his Virgin Galactic as an example of a businessman who is willing to take a punt on transporting humans into space. But what Branson is offering is tourism, a chance to view the curvature of the Earth from sub-orbit for a period of not much more than a half-hour, and for which people will have paid up front, thus insuring he gets his money before he's spent any of his own. The notion that the colonization of space can be built on the back of this triviality is quite, quite surreal.

I Also Heard From: D. Young, Angela and Peter Netmail, Franz Zrilich, John Held Jr, Anna Banana, Theo Nelson