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ROCKY MOUNTAIN WAY: DEAD MAN'S FLATS 2017-03-25
photos by Dale Speirs

I was driving around Cowtown doing some errands and finished up in the northwest quadrant of the city, a few blocks from the Trans-Canada Highway. Looking at the snow-capped Rockies, I decided on the spur of the moment to make a quick run out to the mountains, and zoomed westwards.

I didn't have my Nikon SLR camera with me, so had to make do with my smartphone camera, but managed to get some nice photos. No hiking because I wasn't equipped for it, just roadside stops on the highway as far as Dead Man's Flats and then home again, about two hours including stops for the round trip. Below are the mountains on the northwest corner of Lac des Arcs.

Looking west across a limestone quarry near Dead Man's Flats. The wedge mountain on the two-thirds right side of the horizon is Mount Rundle, just inside Banff National Park. The mountain at left is Ehagay Nakoda. The spire on its shoulder is Ha Ling Peak, named after the first man to climb it.

On the righthand edge of the photo is a snowstorm that was sweeping down the Bow River valley towards me, which is why I didn't go any further than Dead Man's Flats.

On the south side of the Trans-Canada Highway just east of Dead Man's Flats is Mount Lougheed. A snowstorm was brushing the mountain tops.

On my return, I stopped at the entrance into the Kananaskis valley and looked back at the mountains. The bottomlands belong to the Nakoda tribe and the Kananaskis mountains to the provincial park system.

FAR SPEAKING STORIES: PART 5
by Dale Speirs

[Parts 1 to 4 appeared in OPUNTIAs #313, 327, 337, and 361.]

The Number You Have Reached.

THEATER FIVE was an attempt by the American Broadcasting Corporation to revive drama on radio in the middle 1960s, similar to what was once heard on old-time radio (OTR). The series was called that because its time slot was 5 pm weekdays. It was a valiant attempt that failed, alas. This and other radio series are available as free mp3s from www.archive.org.

There are two episodes based on telephones. "A Very Private Phone Call", written by Robert Arthur, was aired in 1964. It is about Laura, a relatively young woman who had married a much older millionaire (a billionaire in today's currency). He was a tyrant who ruled his companies and household with an iron fist, and completely dominated Laura.

He owned companies around the world but never traveled, doing all his business by thirteen colour-coded telephones. The white telephone, for example, was for his South American investments. There was a red telephone which, Laura noticed, never rang. She and everyone else were too afraid to ask why.

Laura dreamed of visiting exotic places. As much as she loved her husband, she wished he would change his mind and go traveling to his businesses around the world. The day comes when he is dying. On his deathbed, he gives her private instructions that no one else is aware of.

In his family there was a history of his male ancestors being disinterred years later and found to have tried to claw their way out of their coffins.** He has given instructions that when he dies, he is to be buried immediately without embalming. He previously arranged with the mortician to have installed inside the casket a microphone that is connected to the red telephone by a direct line. Laura is instructed at his deathbed to stay by the red telephone for three days and answer if it rings.

** Something that did happen occasionally in the past, and which has been documented many times. The victims had gone into a deep trance and it appeared there were no vital signs. The problem no longer exists because if they weren't dead at the time the physician signed the certificate, they would be after the autopsy or when their body was embalmed.

Only she knows what it is all about. After the internment, a company lawyer comes by to visit her in the room with the telephones. He is a young bachelor who travels too much to marry. Unaware of the situation, he wants Laura to travel and see all the businesses she now owns. There would be time, of course, to see the tourist sights as well, and he would be glad to show her around.

Laura's dreams are about to come true, and the idea of doing it with a handsome and younger man certainly helps. As they are talking, the red telephone begins to ring. She tells him it isn't worth answering. Probably just a wrong number. The telephone rings, and rings, and rings, but she doesn't answer it.

"Tomorrow 6-1212", written by Robert Newman, was a 1965 episode about a woman who dialed the Weather Bureau number to find out if it was going to rain, and instead is connected with Weather Control in 2035. Initially there is confusion between her and the man who answers, but he eventually figures out that her call is being bounced off a communications satellite, then back to Earth via a time warp.

He convinces her of what is happening and tells her to leave her telephone off the hook so that the call isn't broken. He gets a team of scientists working on the problem, and has her go down the street to a payphone and call a local physicist to come over so they can talk to him and get action at her end. After some difficulty, she convinces the physicist that it isn't a student prank. He says he will come over to her house, and she dashes back home to resume her connection with the far future.

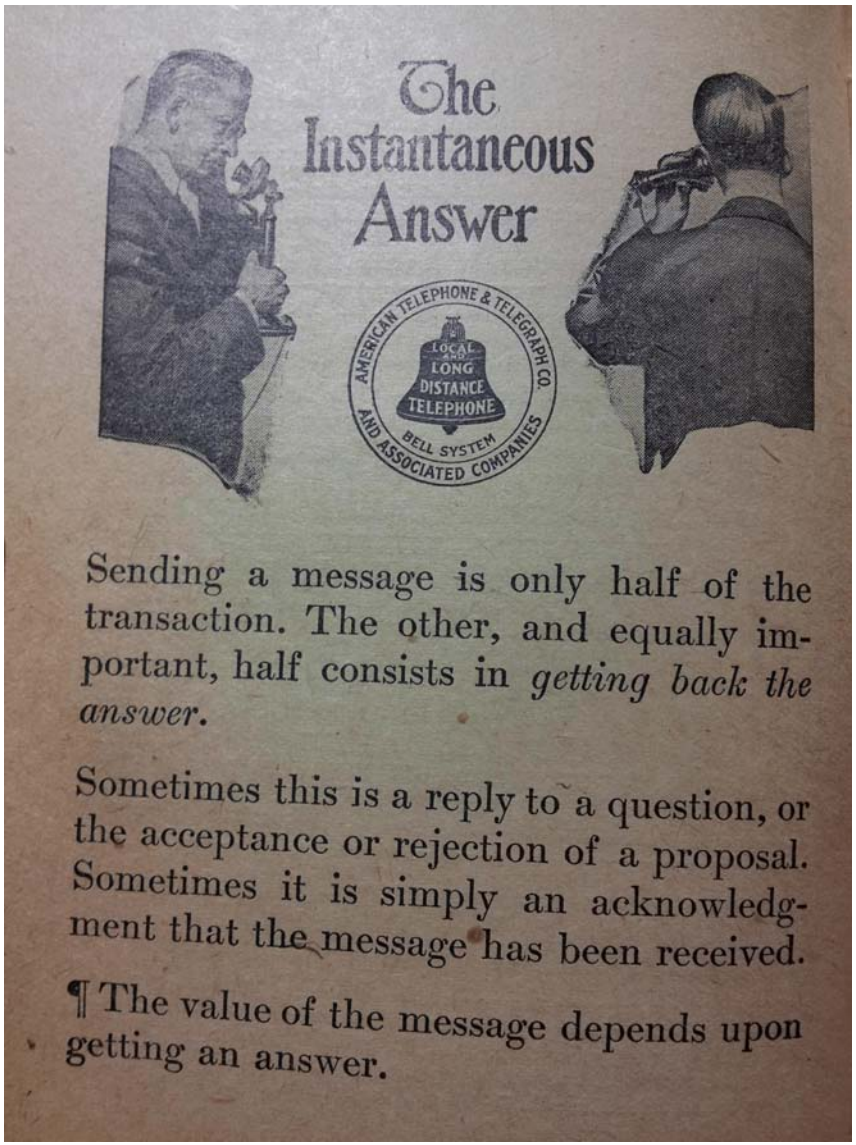
While talking with the 2035 man, the doorbell rings. At that moment, she loses her telephone connection. An operator breaks in on the line and tells her that the phone has now been repaired and she can resume normal service. So ends the future. Both episodes are well acted, with excellent sound quality. Worth listening to.

Rubus Fruticosus Forma Nigra Canadensis Electronica.

"There Is No Time In Waterloo" (2009 October, MCSWEENEY'S) by Sheila Heti is about the effects of a limited production run smartphone produced by Research In Motion of Waterloo, Ontario, the manufacturers of Blackberry smartphones. It supposes they marketed "The Mother Of All Blackberrys", which not only sent emails and made voice calls, but could predict the user's personal near-future and give advice on what to do next.

The device was only sold in Waterloo as a test market, which is why you never heard of it. The Mother was very successful. Customers liked the idea of not having to think, and enjoyed letting a device run their lives. Unfortunately the Mother went out of production. People who couldn't get a replacement were faced with the horror of making their own decisions.

This is only fiction, of course. The idea of people obsessed with handheld devices could never happen in real life.



from THE PHILISTINE, 1910 January

Are We Reaching?

The videophone has been technically possible for mass market use since the 1960s but never really caught on. The main reason seems to be that people would rather not be seen when talking. Videoconferencing remains a specialized application. Skype video, while widespread, is only a fraction of telephone traffic, whether via computer or smartphone. This is probably due to the expense of transmitting data; few people want to blow through their telecom provider's data allowance. The trend of the younger generation is to transmit still photographs with texting or email.

Which brings me to what may be the earliest attempt at plausible technological writing about videophones, the 1914 novel TOM SWIFT AND HIS PHOTO TELEPHONE, by Victor Appleton (a house name). I downloaded the text from www.gutenberg.org

The device is an electrically-charged selenium plate adjacent to the telephone, operating on a third wire. One can imagine that the telephone company would not want to go through all the trouble and expense of replacing twisted-pair wires with a three-wire system.

The photo telephone does not display moving images but only a one-time photograph of the caller. The plate can be re-used or fixed to provide a permanent image. Tom Swift, being the boy genius that he is, also hits on the idea of adding in one of Mr Edison's recording cylinders for a permanent record of the telephone conversation.

The novel begins with Tom arguing with his father about whether or not a photo telephone is possible over copper wires. Tom resolves to work on the problem and his father reluctantly allows it, more on the grounds that it will keep him off the streets. Wire photos over telegraph wires had been tried out by newspapers, so Tom wasn't working on a photo telephone de novo.

Down on the Swift plantation, pardon me, laboratory, dey is an ole coloured servant named Eradicate, who says things like: "*What all am dat, Massa Tom? Yo'ah gwine t' bring de new millenium heah? Dat's de end of de world, ain't it, dat millenium? Golly! Dish heah coon neber 'spected t' lib t' see dat. De millenium! Oh mah landy!*" I can see why no one wants to make a Tom Swift movie. Lawdy, lawdy.

Infodumps clutter the text, many of them since made obsolete by the march of science. Tom tells his father: "*What I'm aiming at is to make an apparatus so that when you go into a telephone booth to talk to a friend, you can see him and he can see you, on a specially prepared plate that will be attached to the telephone*."

"*You mean see him as in a looking-glass, Tom?*"

"*Somewhat, yes. Though I shall probably use a metal plate instead of glass. It will be just as if you were talking over a telephone in an open field, where you could see the other party and he could see you*."

Tom's clinching argument when his father asks him what good is a photo telephone, is that by seeing a picture of the person one is talking to, fraud can be eliminated because there is positive identification. So as you can see, even a century ago telemarketers were a problem.

There's never a dull moment around the Swift manor. Father and son are interrupted when a biplane crashes onto the roof of the house. While they are fetching a ladder, the narrator abruptly breaks away from the story, directly addresses the reader, and begins summarizing all seventeen previous novels in the Tom Swift series.

With the arrival of a ladder, the plot resumes. The aviator has come to seek help from the Swifts. The engine on his biplane doesn't work that well and he would like Tom to cast an eye over it. But the Boy Wonder is more concerned about fixing the bugs in his photo telephone.

The usual variety of alarums and excursions take place, and assorted villains barge into the plot. There are desperate races between airplanes, kidnappings, theft of millions of dollars, and much to-ing and fro-ing.

Tom finally traps the bad guys by telephoning them and recording their conversations on an Edison cylinder and using the photo telephone to get their faces. It is all admitted as evidence into the court trial. No Perry Mason to defend the bad guys.

And so to the next invention. The novel moves along at a breathless pace, zigzagging like a spring calf frolicking in a pasture.

Payphone Blues.

AMOS AND ANDY was one of the most successful OTR comedy series in history, lasting for decades. After the series was on the air for a while, the character Amos Jones gradually faded away when a supporting character, Kingfish Stevens, became more popular and took over. Andy Brown was the gullible stooge, always being manipulated by Kingfish, a sharp-practice man constantly trying to con him or anyone else who had money they might be easily separated from.

"1877 Nickel" was a 1949 episode written by Freeman Gosden and Charles Correll, the two creators and stars of the series. Kingfish learns that Andy is carrying around with him an 1877 nickel as a good luck piece, unaware that the coin was rare and worth $250.

He manages to steal the coin and goes to a phone booth to call a coin dealer and make the sale. In his excitement, he forgets himself and uses the nickel to make the call.

By then, Andy discovers his loss. Kingfish is always the usual suspect on the show, so Andy goes after him. On learning the coin's fate, the two agree to go back to the payphone and crack it open to get the nickel. They are observed by a police officer, who naturally arrests them.

Down at the police station, the truth comes out when the police search the box and find the 1877 nickel. The judge is lenient and lets them off with a warning. Andy is no good at negotiating business deals, so he agrees to let Kingfish in on the sale. He is smarter than he seems though. He pretends to lose the coin and when Kingfish storms away in a huff, carries on with the 1877 nickel.

This episode will not survive the test of time because of the obsolete technology involved. Has anyone under 25 years of age ever used a payphone?

THE GROVES OF ACADEMIA: PART 4
by Dale Speirs

[Parts 1 to 3 appeared in OPUNTIAs #67.1F, 262, and 358.]

Murder On Campus.

There are campuses where one wonders why anyone would send their children there, given the murder rate in some cozy mystery series. The state police would be justified in establishing a full-time homicide squad on campus.

Dr Sophie Knowles is a professor of mathematics at Henley College in Massachusetts. She is the protagonist and Miss Marple of a series written by Ada Madison, the pen name of Camille Minichino.

THE PROBABILITY OF MURDER (2012) sends off Charlotte Crocker, the head librarian, who doesn't make it past Chapter 1. Crocker was said to be loved by everyone on campus, but obviously there was one dissenter. She died in possession of a duffel bag filled with high-denomination banknotes, not obtained from her salary.

Knowles does the Miss Marple routine on campus and off, while the police wander in and out of the plot. She eventually smokes out a pregnant co-ed who was being blackmailed by Crocker. The co-ed's daddy taught her how to use handguns and gave her one for protection. When the time came, she didn't hesitate.

A FUNCTION OF MURDER (2013) brings the Mayor to campus to give a commencement speech, which turns out to be his last official public function. He makes it as far as Chapter 3 before someone sticks a letter opener in his back. The letter opener is a special Henley College souvenir given to all graduating students, so that narrows the list of suspects down to a couple hundred people.

There are plenty of suspects even without whomever had the weapon, as His Honour enjoyed both co-eds and kickbacks on town contracts. The Mayor had framed an assistant for the kickbacks, who is cornered by Knowles while he is holding a gun. Not too bright for a mathematics professor, and she survives only by dumb luck.

THE QUOTIENT OF MURDER (2013) is a cold case story about the re-opening of the campus bell tower 25 years after a co-ed fell from it, supposedly a suicide. Then one of Knowles's students is badly beaten, and the case isn't so cold anymore.

There was a bagful of cash from illicit deals hidden in the bell tower from back when. The murderer had her own problems but repressed them during her career as a college librarian while she waited for the bell tower to be unsealed again after all those years. Naturally Knowles winds up in the tower with a gun pointed at her. With a single bound she was free, etcetera.

BOSTON BLACKIE was an old-time radio (OTR) series about a reformed jewel thief constantly annoying Police Inspector Faraday by playing the Miss Marple part and solving the crime before the police did. The musical interludes and segues are done by a berserk organist. (This and other OTR shows are available as free mp3s from www.archive.org.)

"Professor Beasley Is Murdered" was a 1948 episode set on the campus of Blackie's alma mater. This was no doubt a surprise to listeners as there was no prior suggestion that he was a college man. Beasley has been murdered and there are a plethora of suspects.

Beasley was a grouch and a martinet who was about to give a football scholarship student a failing grade, disqualifying him from a chance at a professional career. An assistant professor might be the murderer since he would be promoted into Beasley's vacant position. A co-ed acts guilty and flees when no one pursues. The Dean has something to hide but won't say what.

The denouement was a bit of a cheat as Blackie uses hidden information to identify Beasley as a blackmailer who was putting the screws on the Dean. Beasley was aiming for the Dean's job, and thought to speed up the process. Blackmail is a dangerous profession when the victims turn on their tormentors.

THE SAINT was an OTR show long before the smarmy Roger Moore began the television series. Vincent Price took time out from being a mad scientist to become Simon Templar, The Saint, on the radio series. He was a much wittier performer than Moore.

"College Campus Threat", written by Dick Powell and created by Leslie Charteris, is a 1951 episode in which Templar is hired by an alumnus whose

daughter is at the centre of poison-pen letters. Her father wants The Saint to find the culprit. Templar wanders about the campus stirring up trouble. The first murder is done by Act 2.

The father is one of those nostalgic alumni who live in the glory days of their past, when he was the star quarterback and the world was young. Now the world has moved on but he can't accept it, nor the fact that is daughter isn't a girl anymore, she is a woman. Campus life isn't the same in 1951 as it was when he was a student in 1926, and from that, the trouble flowed on campus.

Campus Politics.

No federal politics are as vicious as on a campus, where the combatants have tenure and don't have to face re-election. THEATER FIVE was a mid-1960s attempt at reviving OTR drama. It gave it the old college try (pun intended) but failed to draw audiences away from television. The episodes cover drama, mystery, and SF, with excellent sound quality on the archive.org mp3s. Well worth listening to on your workday commutes.

The 1965 episode "Publish Or Perish", written by Raphael David Blau, is a brilliant example of cut-and-thrust politics on campus. Prof. Moorhouse has been called to task by the Dean for not publishing original research often enough. The heat is on and Moorhouse is sweating for his job. His assistant George Gallant has been doing the actual work and writing of papers which are published with Moorhouse and Gallant as co-authors, but the Dean expects to see Moorhouse do some work on his own.

Moorhouse hired Gallant and only the two of them know Gallant's secret; he is an ex-con who did hard time and has no academic qualifications. He is, however, a high-IQ genius who has been doing the original work that Moorhouse is taking credit for. Gallant is being blackmailed by the professor to do it because of his shady past.

Moorhouse comes back from the unpleasant meeting with the Dean and demands Gallant come up with something good that will print under Moorhouse's name only. Gallant later returns with a study he said he did at another institute while on vacation a while back. Moorhouse takes the paper, which is indeed groundbreaking research, publishes it under his name only, and goes about bragging about the wonderful work he did, and he alone.

The downfall comes when Moorhouse is asked to describe the institute where he supposedly did the study. He can't, because it doesn't exist, nor are any of the details real. Gallant had set up Moorhouse for a fall with a completely fictitious paper, and it works perfectly.

When Moorhouse tries to blame Gallant, no one believes him because they all heard him bragging. Moorhouse is dismissed without a reference and Gallant is promoted to the job. A well-executed plot that takes Moorhouse to his doom step by inevitable step.

THE PRINCIPALS (2016) by Bill James is a humourous novel set in an English city with two competing universities. Sedge University, under the direction of Dr Lawford Chote, is a brick-and-sandstone campus more than a century old. His mismanagement has run the university near to bankruptcy. Across town is the rival Charter Mill University, with Dr Victor Tane presiding over what is a glorified polytechnic.

The story alternates between 2014 and flashbacks to 1987 when Mrs Thatcher is slashing academic budgets. The two universities realize there can only be one survivor, and that one must take over the other and absorb it. Any suspense is disposed of in the opening chapter, a flashback from 2014 which explains how everything turned out. The novel must therefore rely on its humour and accurate portrayal of campus politics.

The story is told in flashbacks from 2014. In 1987, the government sent auditors to Sedge University, putting Chote at a disadvantage to Tane as they struggle for supremacy. The struggle is just as vicious as anything ever seen in Whitehall, albeit no guns or knives are used. Chote and Tane sally forth on recon missions against each other. Each have their own cohort of sycophants to do their bidding.

The paranoia strikes deep and into campus life it creeps in hilarious fashion as Chote and Tane mis-interpret each other's actions. Guilt by association is freely used in a manner that would have made Senator McCarthy blush. Those who are not with us all the way are our enemies. Trivial facts are built into mountains of wild surmise, and conspiracy theorists have a field day.

The politics of campus life are well done with good humour. Recommended.

A Kinder, Gentler Campus.

THE HALLS OF IVY was an OTR series that ran from 1950 to 1952. It was a comedic series, not the laugh-out-loud kind, but rather the type where the audience chuckles heartily. The series left a good reputation and is worth listening to on your morning commute or while working about the house.

It was created by Don Quinn, the writer for FIBBER MCGEE AND MOLLY, but he couldn't handle the quieter way of writing. The scripts for HALLS were therefore written by Jerome Lawrence and Robert Lee, or Milton and Barbara Merlin, who could do the dry wit.

The show was done for Ronald Colman and his wife Benita Hume, who played the principal characters, William Todhunter Hall, president of Ivy College, and his wife Vicky, formerly an English music hall singer Victoria Cromwell. The plots were basic quandaries of little importance outside the campus, but presented problems for the Halls to fuss over before the last-minute resolution.

Episode titles give an idea, such as "Shakespeare Expert", "Chamber Music And Knockwurst Society", and "Poetry Reading". Something like SEINFELD, a show about nothing, where the characters obsess over minutiae. Available from www.archive.org and well recommended.

My dear old alma mater.

BWAH HA! HA!: PART 2
by Dale Speirs

[Part 1 appeared in OPUNTIA #371.]

Microscopic Visions.

THE WEIRD CIRCLE was an old-time radio (OTR) series that ran from 1943 to 1945. No credit was ever given to writers, cast, or production crew. The scripts were adapted from public domain stories; Edgar Allan Poe was a particular favourite. (This and other OTR shows are available as free mp3s from www.archive.org.)

The episode "Diamond Lens" aired on 1944-12-31. This episode was based on a 1858 story by Fitz James O'Brien, who was unmentioned on the show.

Alan Linley is a young man who is unhealthily obsessed with revolutionizing the science of microscopy. Not something usually associated with mad scientists, who generally want to rule the world or destroy it, not look inside water droplets. Be that as it may, he is originally funded by his rich father but is eventually cut off for lack of results.

Linley's next-door neighbour happens to be a diamond smuggler. When the fool casually shows Linley a 140-caret flawless gem, he is not long for this world and is murdered. Linley uses the diamond as the lens for his microscope, with a walloping electromagnetic field that somehow modifies the diamond. He can now see deep inside a drop of water.

Linley thinks he can see and hear a beautiful woman in the droplet, and lives for her and her alone. The problem is that Linley has gone around the bend. The musical sound of her voice is only some nearby wind chimes, and the rest is unrestrained imagination. A police detective arrives looking for the smuggler and finds himself unexpectedly investigating a murder.

The truth eventually comes out. Linley doesn't go quietly. He dies as he lived, at the top of his voice, while resisting arrest. In the struggle he falls back onto his microscope and is electrocuted by the power supply to the magnets. The unnamed actor who played Linley rants and raves from his first sentence to his last. He runs the gamut of emotions from A to A, that is, A for anger.

Rutherford's Atoms: The Theory And Practice.

Dr Ernest Rutherford was one of the pioneers of experimental nuclear physics in the early decades of the 1900s. In 1911, he developed a model which proposed that atoms have a heavy central nucleus with electrons in orbit around it. The idea has since been replaced by quantum mechanics, which considers electrons to be probability waves in shells of different energy levels around a proton/neutron combination.

However, the basic idea of the atom as a planetary system can be used as a very simplified explanation for the general public. It caught the hold of the imagination of many people. Even today, a schematic of electrons whirling around a nucleus is a popular symbol of atomic energy agencies worldwide and as a symbol for atomic studies.

It didn't take long for science fiction writers to latch onto the concept for their stories. If one could miniaturize oneself to subatomic particle level, then the electrons might be planets of a solar system. An intrepid scientist could shrink down and visit an electron planet and find strange new worlds. Conversely, our solar system might just be an atom in a bigger universe and so on to infinity.

Rutherford's Atoms: Golden Girls.

Ray Cummings (1887-1957) was one of the pioneer science fiction writers. His most famous work is "The Girl In The Golden Atom", first published as a short story in 1919. The sequel "The People Of The Golden Atom" appeared in 1920. A novel under the title of the first story was published in 1922. The novel is available as a free ebook from www.gutenberg.org.

The first chapter of the novel is basically a recapitulation of "Diamond Lens". The protagonist, only identified as The Chemist, is relating a story to friends in a club about his microscopical researches. His new superscience microscope lens allows him to see a world within an atom of gold in a wedding ring. There, splashing around in a pond, is a beautiful young maiden. (Never a fat middle-aged man or an elderly woman ravaged by time; always a nubile wahini.)

He watches from afar over a week as she comes and goes. Alas, the superscience lens eventually fails catastrophically. The Chemist decides he will find a method to actually go down into the atom of gold and meet the woman, which brings us to Chapter 2. With copious amounts of hand-waving, he tells of finding a combination of chemicals to shrink or expand himself to and from electron size, mixed in with some mumbo-jumbo about the subconscious mind. There is additional hand-fluttering about how he could find the exact same gold atom where the beautiful girl lived amongst the quadrillions of other atoms in that same spot on the wedding ring. He succeeds, which seems logical as otherwise there would be no story.

The descent into the gold atom goes well. The Chemist not only finds the exact same atom, he lands near the pond and the girl. There follow a long series of adventures, alarums, and excursions. Later, friends of The Chemist also make trips into the atoms, with their own adventures. The novel moves briskly along as an action-adventure story.

Rutherford's Atoms: Macroscopic Visions.

If a mad scientist can shrink things, could he not go in the opposite direction? Green Peyton Wertenbaker took up this idea in a story "The Man From The Atom", first published 1923 August in SCIENCE AND INVENTION, and later in the premiere issue of AMAZING STORIES in 1926.

The narrator of the story is convinced by Professor Martyn to test a machine that can expand him in size indefinitely, to the bounds of the universe. The hand-waving method is that it combines two identical atoms into a bigger one. Before anyone shouts "Fusion reactor!", no, it doesn't do that, but just sticks them together like glue. A human wearing such a machine would expand to any measurement. It can also reverse the process by splitting the atoms into identical but smaller atoms half the size, and no, there is no fission reaction.

The Professor, who doesn't seem to have an actual academic appointment, straps the gizmo on the hero's spacesuit. The narrator wants to see the stars, and therefore twists the dial to 11. He expands off Earth, then sees the Solar System dwindle away, and then the stars as tiny specks rotating in the galaxy. As he grows bigger, time speeds up. The galaxy becomes a speck among many specks, indistinguishable from the others.

Too late, the hero realizes that he can't shrink himself back down again and find Earth. Only ten minutes have gone by for him, but millions of years on Earth. Even if he could find the home galaxy, the Solar System has swept around the rim and is far beyond where he left. The human race would be long gone, whether evolved into another species or extinct. He realizes he is forever lost.

LET MARS DIVIDE ETERNITY IN TWAIN: PART 9
by Dale Speirs

[Parts 1 to 8 appeared in OPUNTIAs #310, 321, 328, 332, 337, 354, 357, and 369. Reviews of the WAR OF THE WORLDS movies appeared in #289.]

Old Mars.

Lord Dunsany was one of the finest fantasy authors that lived. He had a series of stories about the clubman Joseph Jorkens, a teller of tall tales.

"Our Distant Cousins" (1929) is a variation in this series. Instead of Jorkens relating a story, he takes the narrator to visit a man named Terner, who flew to Mars in 1924 when it was at close opposition to Earth.

Terner's airplane took off from the Ketling Aerodrome in England, flying up to high altitude and then using rockets to get clear of Earth. From there, it was on to Mars in a one-month voyage. He had, of course, compressed air to breathe, water, and food.

Fearing his body would explode in the vacuum of space, Terner wrapped himself in tight bandages. We now know, but didn't until the middle 1960s spacewalks, that spacesuits do not have to be reinforced. Human skin is more than strong enough to keep the body from exploding in a vacuum.

Terner also took into account the temperature control problems of the cold of space and the heating of raw sunlight unfiltered by an atmosphere.

Dunsany must have been reading up somewhere on orbital dynamics, because Terner also explains in detail his transfer orbit between Earth and Mars. He had to leave Earth aiming at a point where Mars would be in a month, not where it was then. Dunsany was a hunter, so he may have been guessing from his experience of shooting game on the wing, where the gun has to be aimed ahead of the prey. It could also have been his army experience, where artillery has to be fired ahead of moving targets, particularly in aerial dogfights.

Nor did Terner forget the friction of atmospheric entry. He had to slowly glide his aircraft into the Martian atmosphere to avoid burning up. That was something not obvious to a lot of fantasists at the time, so Dunsany must have done some careful thinking in planning this story. The reason our modern spacecraft blaze back into the atmosphere is because we are too impatient to bleed off velocity a little bit at a time by skipping around the atmosphere.

Terner lands on Old Mars, the one with a breathable atmosphere, canals, and humanoids. He finds the humanoids living behind heavy chain-link fences and surmises there must be a dangerous animal in the woods. It transpires though, that they were living in chicken runs. They were kept for food by a octopoid species that might have been inspired by H.G. Wells and might have inspired Lovecraft's Cthulhu.

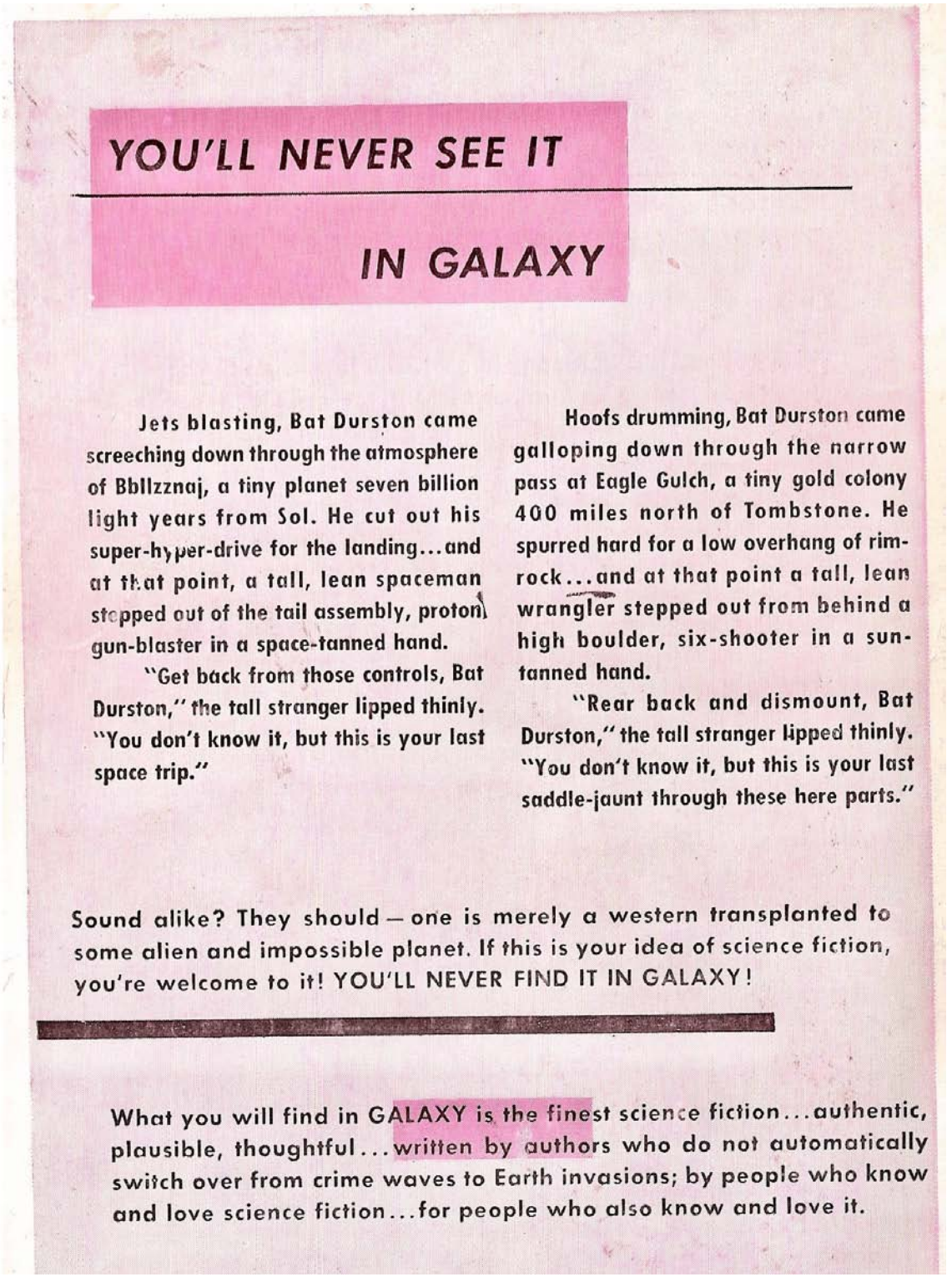
Terner has to make a run for it lest he end up on the dinner table. In his hurry, he miscalculates his return flight vector and ends up on a vegetated asteroid instead of Earth. With miniature elephants, one of which he captures and puts into a matchbox for the trip home. And so back home, although en route he loses the micro-elephant and his camera from mishaps. Since he has no proof that he was ever on Mars, no one believes his story.

Dunsany obviously did a lot of research on this story, using the astronomical evidence of the 1920s. (ERB stories of Mars are beneath contempt.) It comes off a lot better than many subsequent space opera stories, even if it is totally obsolete since the middle 1960s.

Advertisement from LILLIPUT, 1947 April

"Surveyor Of Mars" (2012) by Christopher McKitterick, is from the anthology WESTWARD WEIRD, edited by Martin H. Greenberg and Kerrie Hughes. It is a classic Bat Durston story.

Homesteaders on Old Mars are riled up about the Company claim-jumping and stealing land, stampeding the women and raping the cattle. (And a tip of the ole cowboy hat to Mel Brooks, who produced the finest Bat Durston movie ever made, BLAZING SADDLES.) The homesteaders organize into a vigilante group and declare independence. You can see the plot coming three pages before it gets there.



YOU'LL NEVER SEE IT

IN GALAXY

Jets blasting, Bat Durston came screeching down through the atmosphere of Bbllzznaj, a tiny planet seven billion light years from Sol. He cut out his super-hyper-drive for the landing...and at that point, a tall, lean spaceman stepped out of the tail assembly, proton gun-blaster in a space-tanned hand.

"Get back from those controls, Bat Durston," the tall stranger lipped thinly. "You don't know it, but this is your last space trip."

Hoofs drumming, Bat Durston came galloping down through the narrow pass at Eagle Gulch, a tiny gold colony 400 miles north of Tombstone. He spurred hard for a low overhang of rim-rock...and at that point a tall, lean wrangler stepped out from behind a high boulder, six-shooter in a sun-tanned hand.

"Rear back and dismount, Bat Durston," the tall stranger lipped thinly. "You don't know it, but this is your last saddle-jaunt through these here parts."

Sound alike? They should — one is merely a western transplanted to some alien and impossible planet. If this is your idea of science fiction, you're welcome to it! YOU'LL NEVER FIND IT IN GALAXY!

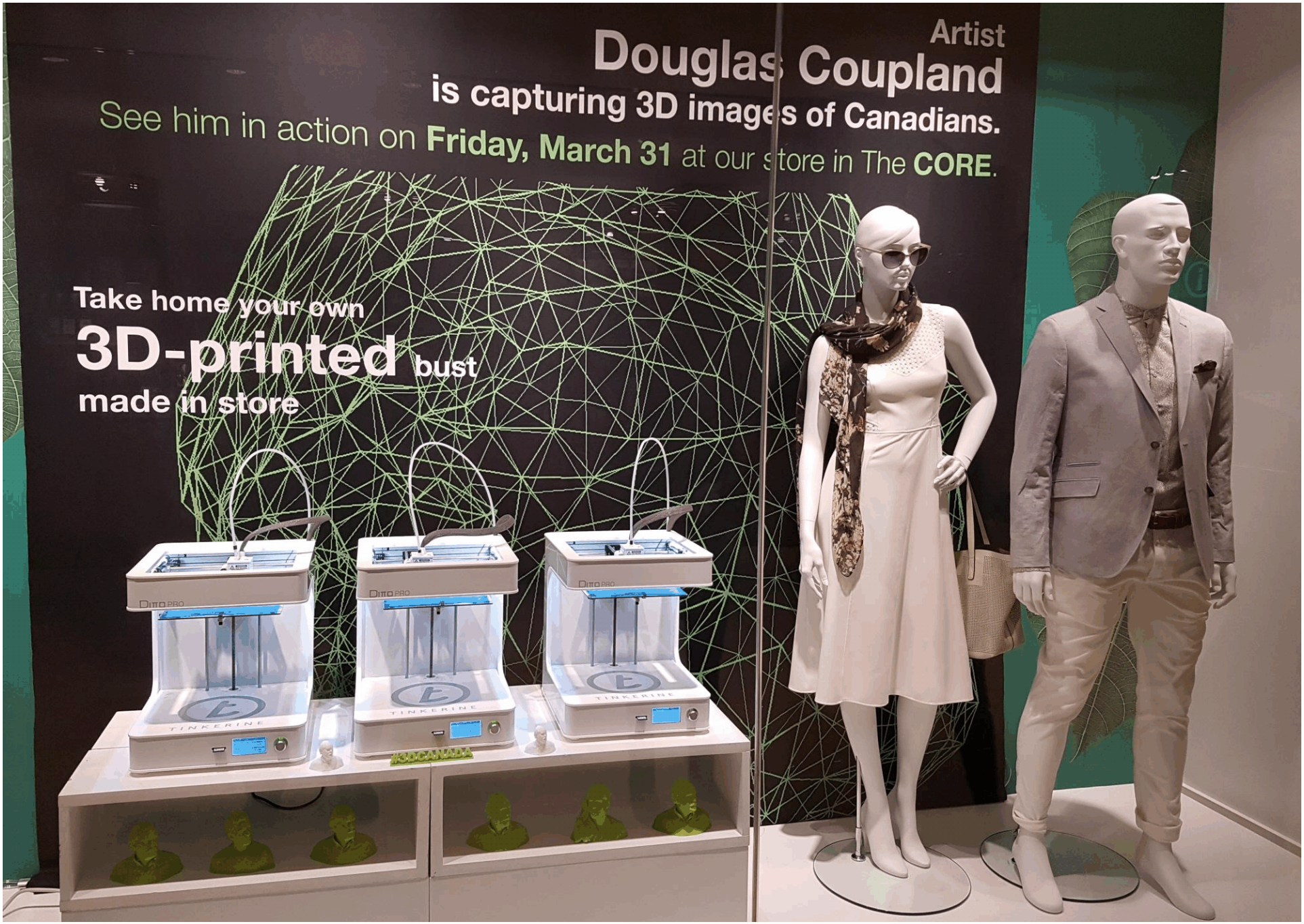
What you will find in GALAXY is the finest science fiction...authentic, plausible, thoughtful...written by authors who do not automatically switch over from crime waves to Earth invasions; by people who know and love science fiction...for people who also know and love it.

At right: The back cover of the 1950 October issue of GALAXY. Contrary to what the editor asserted, later issues of GALAXY did have Bat Durston stories. This type of story dominates today's "soft" SF, where authors write human-condition novels set on alien worlds which could just as easily be transplanted to downtown Manhattan.

FROM THE DEPARTMENT OF OMINOUS FOREBODINGS
photo by Dale Speirs

I photographed this window display in the downtown core of Calgary at the Simons clothing megastore. Unfortunately I wasn't able to attend the event.

As you know, Professor, the Internet is destroying retail stores and publishing in our time. Present-day 3D printers are very primitive, about where personal computers were in the early 1980s. The technology will improve, and a couple of decades from now it will be the manufacturers' turn to be destroyed.



Luger, R., et al (2017-03-12) **A terrestrial-sized exoplanet at the snow line of TRAPPIST-1.** Preprint at arXiv:1703.04166v1 [astro-ph.EP], www.arXiv.org

Authors' abstract: "*The TRAPPIST-1 system is the first transiting planet system found orbiting an ultra-cool dwarf star. At least seven planets similar to Earth in radius and in mass were previously found to transit this host star. Subsequently, TRAPPIST-1 was observed as part of the K2 mission and, with these new data, we report the measurement of an 18.764 day orbital period for the outermost planet, TRAPPIST-1h, which was unconstrained until now. This value matches our theoretical expectations based on Laplace relations and places TRAPPIST-1h as the seventh member of a complex chain, with three-body resonances linking every member. We find that TRAPPIST-1h has a radius of 0.715R and an equilibrium temperature of 169 Kelvin, placing it at the snow line. We have also measured the rotational period of the star at 3.3 days and detected a number of flares consistent with an active, middle-aged, late M dwarf.*"

"*The star TRAPPIST-1 (EPIC 246199087) was observed for 79 days by NASA's Kepler Space Telescope in its two-reaction wheel mission (K2) as part of Campaign 12, starting on 2016 Dec 15 and ending on 2017 Mar 04.*"

"*... all planets except f and h have a tidal heat flux higher than Earth's total heat flux. The incident stellar flux on planet h, 200 Watts per square metre, is below the 300Wm required to sustain surface liquid water under a N_2-CO_2-H_2O atmosphere. ... In theory, the surface of TRAPPIST-1h could harbor liquid water under an H_2-rich atmosphere, either primordial or resulting from continuous outgassing. ... Alternatively, a liquid water ocean is possible under a layer of ice. Assuming the Earth's current geothermal flux, a layer of 2.7 km (the mean depth of Earth's oceans) would be necessary.*"

Speirs: The planets of Trappist-1 are unlikely to be colonizable by humans but could support microscopic life. Planet h is a snowball planet on the outer rim of the habitable zone, at 169°K, which is -104°C. We never get that sort of temperature in Calgary. However, it is possible that if a layer of ice was floating on top of liquid, then microbes could evolve underneath, using heat from tidal energy of the planets to survive.

Obertasa, A., C. Van Laerhovenb, and D. Tamayo (2017-03-24) **The stability of tightly-packed, evenly-spaced systems of Earth-mass planets orbiting a Sun-like star.** Preprint at arXiv:1703.08426v1 [astro-ph.EP] www.arXiv.org

Authors' abstract: "*Many of the multi-planet systems discovered to date have been notable for their compactness, with neighbouring planets closer together than any in the Solar System. Interestingly, planet-hosting stars have a wide range of ages, suggesting that such compact systems can survive for extended periods of time. We have used numerical simulations to investigate how quickly systems go unstable in relation to the spacing between planets, focusing on hypothetical systems of Earth-mass planets on evenly-spaced orbits (in mutual Hill radii).*" [The Hill radius is the distance to which a planet or star controls the attraction of satellites.]

"In general, the further apart the planets are initially, the longer it takes for a pair of planets to undergo a close encounter. We recover the results of previous studies, showing a linear trend in the initial planet spacing between 3 and 8 mutual Hill radii and the logarithm of the stability time. Investigating thousands of simulations with spacings up to 13 mutual Hill radii reveals distinct modulations superimposed on this relationship in the vicinity of first and second-order mean motion resonances of adjacent and next-adjacent planets. ... Applying the outcomes of our simulations, we show that isolated systems of up to five Earth-mass planets can fit in the habitable zone of a Sun-like star without close encounters for at least 109 orbits."

"Since the first detection of exoplanets over 20 years ago, more than 3500 exoplanets in over 26001 systems have been discovered. Nearly 600 of these are multi-planet systems and are very different from the Solar System."

Torres de Farias, S., and F. Prosdocimi (2017) **Buds of the tree: the highway to the last universal common ancestor.** INTERNATIONAL JOURNAL OF ASTROBIOLOGY 16:105-113

Authors' abstract: "*The last universal common ancestor (LUCA) has been considered as the branching point on which Bacteria, Archaea and Eukaryotes have diverged. However, the increased information relating to viruses' genomes and the perception that many virus genes do not have homologs in other organisms opened a new discussion. Based on these facts, there has emerged the idea of an early LUCA that should be moved further into the past to include*

viruses, implicating that life should have originated before the appearance of cellular life forms."

"Another point of view from advocates of the RNA-world suggests that the origin of life happened a long time before organisms were capable of organizing themselves into cellular entities. Relevant data about the origin of ribosomes indicate that the catalytic unit of the large ribosomal subunit is what should actually be considered as the turning point that separated chemistry from biology. Other researchers seem to think that a tRNA was probably some sort of a strange attractor on which life has originated. Here we propose a theoretical synthesis that tries to provide a crosstalk among the theories and define important points on which the origin of life could have been originated and made more complex, taking into account gradualist assumptions. Thus, discussions involving the origin of biological activities in the RNA-world might lead into a world of progenotes on which viruses have been taken part until the appearance of the very first cells."

Izon, G., et al (2017) **Biological regulation of atmospheric chemistry en route to planetary oxygenation.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 114:E2571-E2579

Authors' abstract: "*Emerging evidence suggests that atmospheric oxygen may have varied before rising irreversibly ~2.4 billion years ago, during the Great Oxidation Event (GOE). Significantly, however, pre-GOE atmospheric aberrations toward more reducing conditions, featuring a methane derived organic-haze, have recently been suggested, yet their occurrence, causes, and significance remain underexplored. To examine the role of haze formation in Earth's history, we targeted an episode of inferred haze development. Our redox-controlled (Fe-speciation) carbon- and sulfur-isotope record reveals sustained systematic stratigraphic covariance, precluding non-atmospheric explanations. Photochemical models corroborate this inference, showing delta36S/delta33S ratios are sensitive to the presence of haze*."

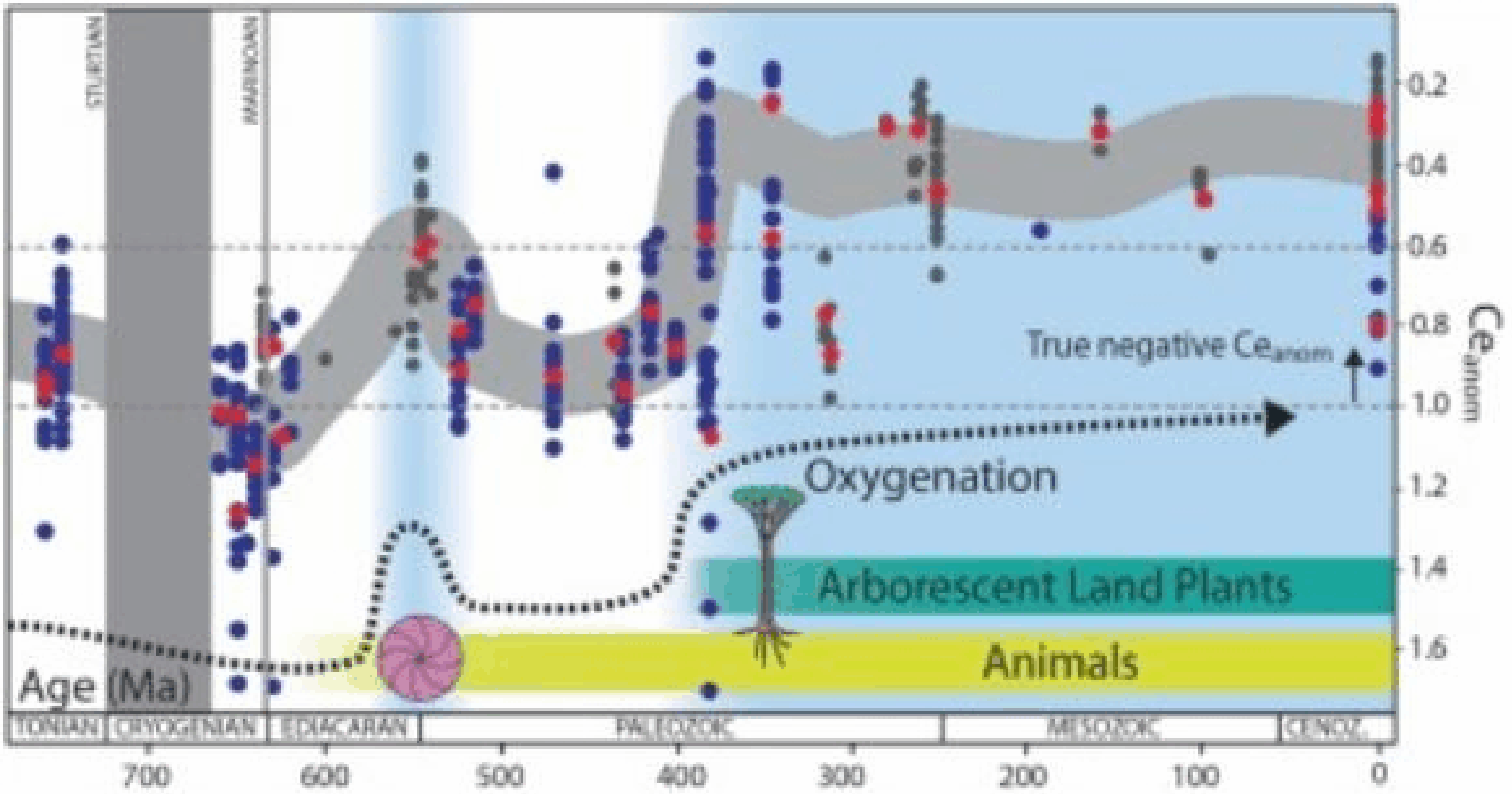
"*Exploiting existing age constraints, we estimate that organic haze developed rapidly, stabilizing within ~0.3 ± 0.1 million years (Myr), and persisted for upward of ~1.4 ± 0.4 Myr. Given these temporal constraints, and the elevated atmospheric CO_2 concentrations in the Archean, the sustained methane fluxes necessary for haze formation can only be reconciled with a biological source. Correlative $d^{13}C_{Org}$ and total organic carbon measurements support the interpretation that atmospheric haze was a transient response of the biosphere to increased nutrient availability, with methane fluxes controlled by the relative availability of organic carbon and sulfate. Elevated atmospheric methane concentrations during haze episodes would have expedited planetary hydrogen loss, with a single episode of haze development providing up to 2.6 to 18 × 10^{18} moles of O_2 equivalents to the Earth system. Our findings suggest the Neoarchean likely represented a unique state of the Earth system where haze development played a pivotal role in planetary oxidation, hastening the contingent biological innovations that followed*."

Wallace, M.W., et al (2017) **Oxygenation history of the Neoproterozoic to early Phanerozoic and the rise of land plants.** EARTH AND PLANETARY SCIENCE LETTERS 466:12-19

Authors' abstract: "*There has been extensive debate about the history of Earth's oxygenation and the role that land plant evolution played in shaping Earth's ocean-atmosphere system. Here we use the rare earth element patterns in marine carbonates to monitor the structure of the marine redox landscape through the rise and diversification of animals and early land plants. In particular, we use the relative abundance of cerium, the only redox-sensitive rare earth element, in well-preserved marine cements and other marine precipitates to track seawater oxygen levels."*

"Our results indicate that there was only a moderate increase in oceanic oxygenation during the Ediacaran [600 to 542 megayears ago]*, followed by a decrease in oxygen levels during the early Cambrian* [542 to 488 mya]*, with significant ocean anoxia persisting through the early and mid Paleozoic* [550 to 250 mya]. *It was not until the Late Devonian* [416 to 299 mya] *that oxygenation levels are comparable to the modern. Therefore, this work confirms growing evidence that the oxygenation of the Earth was neither unidirectional nor a simple two-stage process. Further, we provide evidence that it was not until the Late Devonian, when large land plants and forests first evolved, that oxygen levels reached those comparable to the modern world. This is recorded with the first modern-like negative Ceanom (values <0.6) occurring at around 380 Ma (Frasnian). This suggests that land plants, rather than animals, are the engineers responsible for the modern fully oxygenated Earth system*."

[The chart on the next page is from the article.]



MacIver, M.A., et al (2017) **Massive increase in visual range preceded the origin of terrestrial vertebrates.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 114:E2375-E2384

Authors' abstract: "*Starting 385 million years ago, certain fish slowly evolved into legged animals living on land. We show that eyes tripled in size and shifted from the sides to the top of the head long before fish modified their fins into limbs for land. Before permanent life on land, these animals probably hunted like crocodiles, looking at prey from just above the water line, where the vastly higher transparency of air enabled long-distance vision and selected for larger eyes. The "buena vista" hypothesis that our study forwards is that seeing opportunities far away provided an informational zip line to the bounty of invertebrate prey on land, aiding selection for limbs, first for brief forays onto land and eventually, for life there.*"

Speirs: I reviewed a book in OPUNTIA #53.1A (2004), IN THE BLINK OF AN EYE, about how vision began and touched off an arms race between predators and prey.

LETTERS TO THE EDITOR

[Editor's remarks in square brackets. Please include your name and town when sending a comment. Email to opuntia57@hotmail.com]

FROM: Milt Stevens 2017-03-29
Simi Valley, California

OPUNTIA #367: To quote Dennis the Menace, "*What do you mean before tellybision? There's always been tellybision.*" For those of us who remember the time before, the Dawn of Television was a very personal experience. My family's first television came in 1948. My father had planned to take us on a family vacation, but my mother and I decided to catch chicken pox instead. Since he had some extra time and money, my father (who was always mechanically inclined) bought a kit and built a television with a 9 inch screen. Goshwow. He only needed one visit to a TV repairman to make the thing actually work.

There were two TV stations in Los Angeles at the time, and they broadcast from 6 pm to midnight. Like most American families of the time, we would watch the test patterns with utter fascination. When they actually broadcast cooking shows it was close to nirvana.

[I was born in 1955 in rural west-central Alberta, and wouldn't have paid much attention to television until the early 1960s, by which time it was out of its growing pains. It didn't help that there was only one local station, plus we could pick up a few from Calgary or Edmonton at night when the atmospherics were good. It wasn't until the late 1960s, when we had a colour television set and more decent programming that I began to watch a lot of television.]

OPUNTIA #368: I remember STARR OF SPACE. In 1953-54, I was 11 or 12 years old, I had already acquired a considerable SF habit and would watch/listen to anything that even pretended to be science fiction. Sometimes, they didn't pretend very hard.

I became disillusioned with Starr when he visited a star orbiting Jupiter. I may have been young, but I knew more science than that. This is far from the only example of utterly awful science in the shows of the period. One wonders where they got their script writers. The movie TEENAGE CAVEMAN may hold the answer.

[Not without justification, Hollywood producers believe that people will watch almost anything they shovel out. Hence screenwriters are low men on the totem pole, paid less than the cameramen or janitors. The Star Wars franchise has made a fortune recycling the same plot from one movie to the next.]

OPUNTIA #369: In a previous installment of "Botanical Fiction," you probably mentioned Stanley Weinbaum. I think his Mars is based on the assumption that on a world with very little water, plants might develop the habit of getting up to go look for it. Thus we have Tweel, who is an amiable enough fellow even if he is a plant. The dream beast that has snared Tweel at the beginning of the story seems to be a plant. Telepathic plants are really quite rare in the literature.

To go back to #368, Weinbaum also put some interesting botanical specimens on Venus. The jackcatch trees were fairly standard tentacle, carnivorous greenies. However, the doughpots were something different. They were mindless masses of creeping protoplasm that consumed all organic material they encountered. Venusian jungles were ideal environments for the doughpots.

WORLD WIDE PARTY ON JUNE 21

Founded by Benoit Girard (Quebec) and Franz Miklis (Austria) in 1994, the World Wide Party is held on June 21st every year. 2017 will be the 24th year of the WWP.

At 21h00 local time, everyone is invited to raise a glass and toast fellow members of the Papernet around the world. It is important to have it exactly at 21h00 your time. The idea is to get a wave of fellowship circling the planet. Rescheduling it to a club meeting or more convenient time negates the idea of a wave of celebration by SF fans and zinesters circling the globe.

At 21h00, face to the east and salute those who have already celebrated. Then face north, then south, and toast those in your time zone who are celebrating as you do. Finally, face west and raise a glass to those who will celebrate WWP in the next hour.

Raise a glass, publish a one-shot zine, have a party, or do a mail art project for the WWP. Let me know how you celebrated the day.