

OPUNTIA

371

Late March 2017

Opuntia is published by Dale Speirs, Calgary, Alberta. It is posted on www.efanzines.com and www.fanac.org. My e-mail address is: opuntia57@hotmail.com When sending me an emailed letter of comment, please include your name and town in the message.

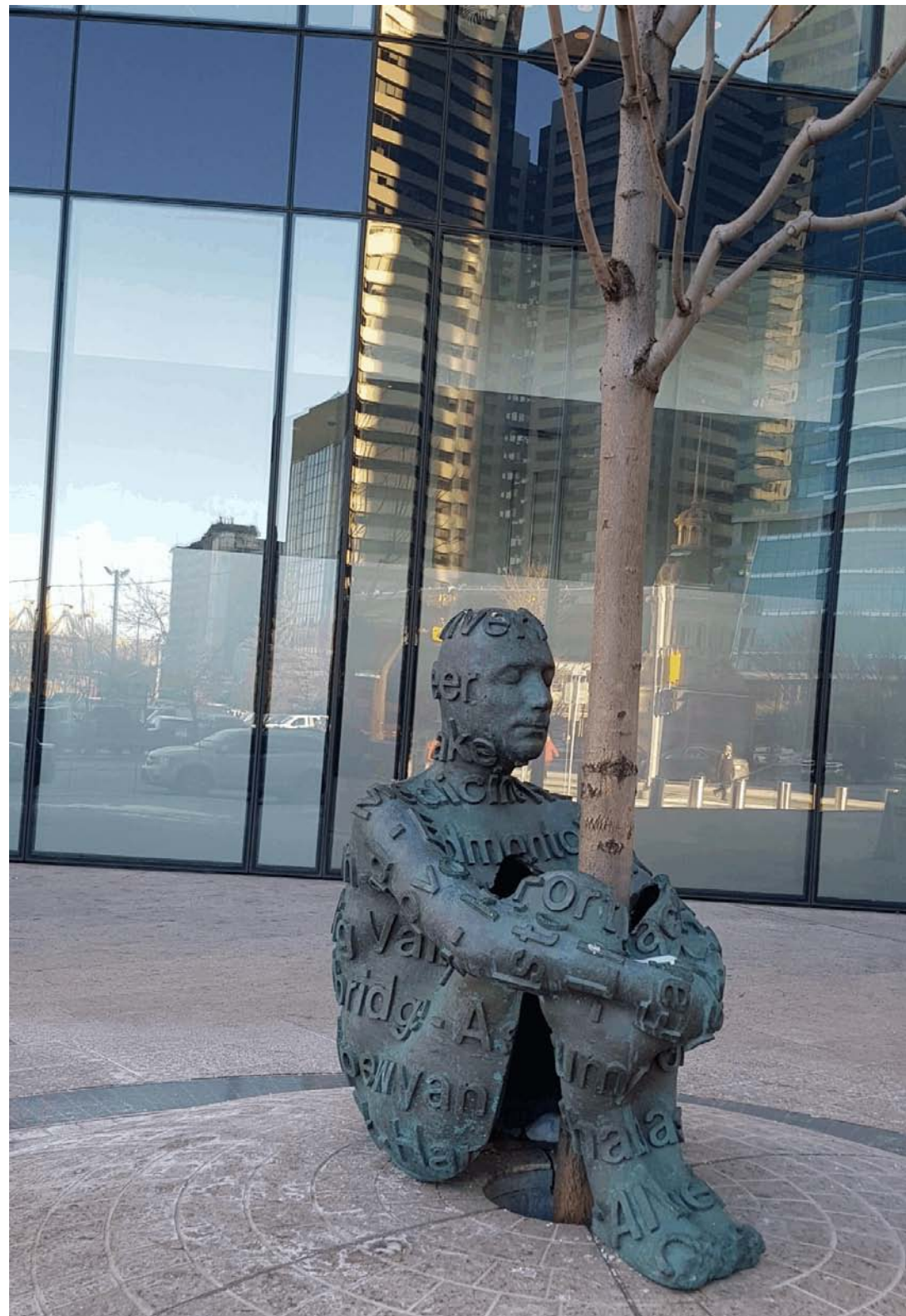
COWTOWN TREE HUGGERS

photo by Dale Speirs

This art piece, on the northwest corner of the Bow Tower in downtown Calgary, is one of the more imaginative sculptures on the skyscraper plazas.

The tree is a green ash, one of the few species that will persist here over the long run. Green ashes are slow growing, and it will be three or four decades before this statue has to be adjusted to fit the expanding trunk.

Calgary was treeless except along riverbanks when the Mounties founded it in 1875. Today there are only about ten species that can survive the dry climate and winter chinooks over time. Trees of any species seldom if ever surpass two stories in height.



TRANSIT FANNING IN CALGARY: PART 18

by Dale Speirs

[Parts 1 to 17 appeared in OPUNTIA's #256, 258, 260, 264, 269, 275, 283, 298, 302, 327, 333, 341, 348, 357, 359, 365, and 369.]

I was riding on the LRT a while back when I decided to try photographing the route with my smartphone. I thought there might be blurring, but the photographs turned out quite well. The sequences begin on the next page.

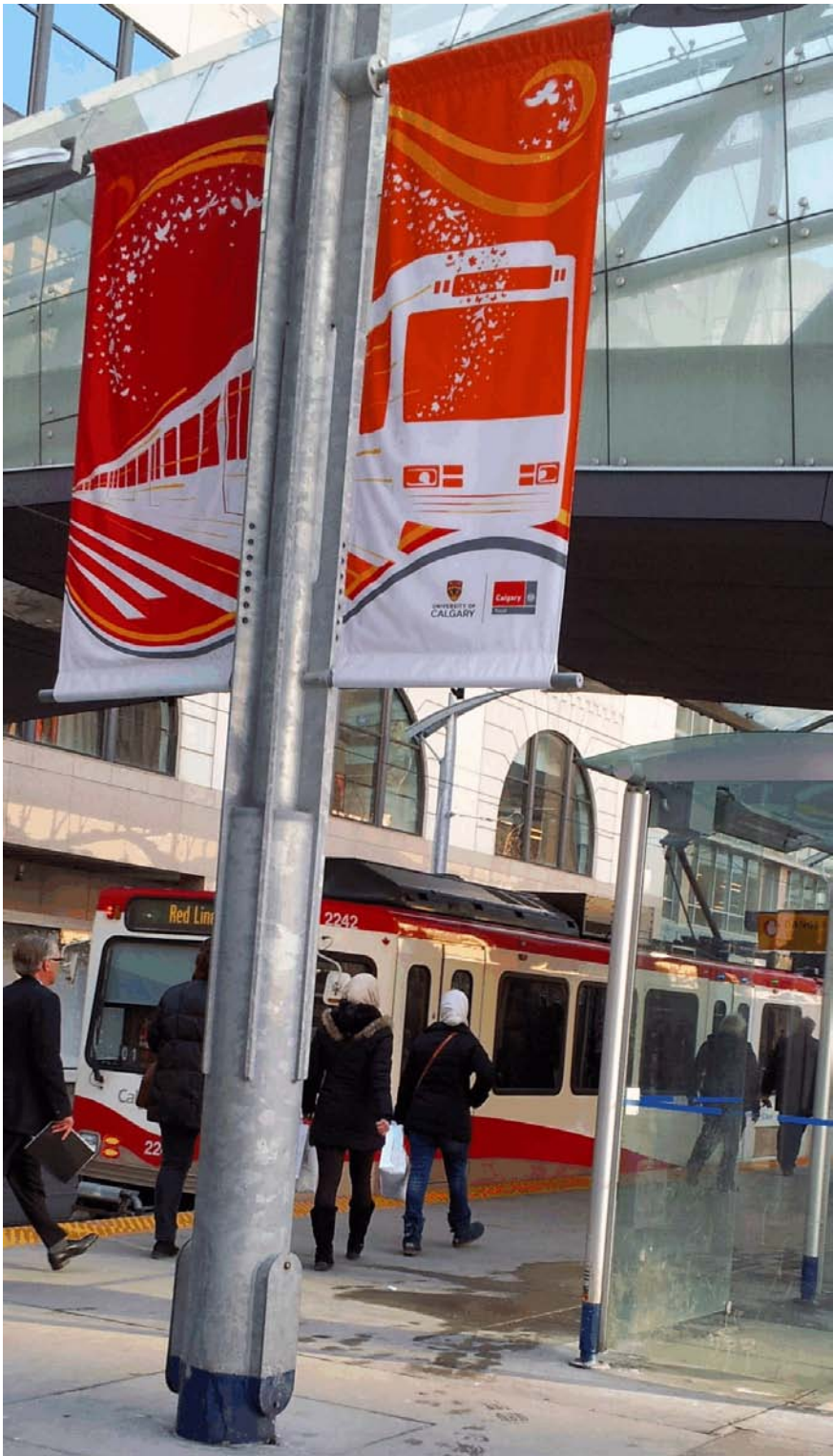
There are two LRT lines. The Red Line runs from the far northwest through the downtown core and then into what Calgarians refer to as the Deep South. The Blue Line runs from the far western suburbs in the Rocky Mountain foothills through the core and then turns northeast and goes way up into the northeast out on the prairie steppes. The two lines overlap downtown along 7 Avenue South, making it easy to transfer from one to the other, or to bus routes. Calgary Transit has a unified system allowing riders to switch back and forth for 90 minutes on a ticket transfer, or unlimited riding with a monthly pass (which is what I use).

The Red Line doesn't have much of a view. The Deep South leg runs through industrial districts or alongside freeways, so the view is only the back sides of warehouses and traffic jams.

The Blue Line has a more enjoyable view in its middle section, although the two ends are down along freeway medians. Going west into the foothills, as soon as the train leaves the core, it rises up on an elevated track four stories above the ground. This allows the tracks to clear a giant spaghetti intersection where Crowchild Trail (north-south) crosses Bow Trail (east-west) and the downtown access roads (streets built in pioneer days and never designed for commuter traffic). If you live in a big city, I'm sure you know what a spaghetti junction is like; ours are no different.

Going east up onto the prairie plateau, the Blue Line runs along an escarpment with scenic views of the Bow River valley where the river suddenly makes a right-angle turn and goes south. The photos on the next few pages are the west part of the Blue Line.

At right, on this page, is the 4 Street SW station on 7 Avenue where the two routes overlap. Notice the banners.



Just after leaving the downtown core and climbing up onto the elevated track. Crossing over 9 Avenue South which, behind the camera, runs alongside the railroad tracks and forms the southern boundary of the downtown core.

The tubular structure ahead on the tracks is the Sunalta station, named after a mixed-use district on the other side of the tracks.



At right: Just before pulling into the Sunalta station. The brick building is the Greyhound bus terminal. Since bus riders are on a budget and seldom have the price of a taxi, there is a pedestrian overpass to get them to the train station. Otherwise it is a long walk downtown, especially when carrying luggage.



Continuing westward past Sunalta, overtop the spaghetti junction. In the distance you can see two huge brown piles of pea gravel behind the car lot. The Roads Dept will use them up during snowfalls.

Calgary glaziers do more business each winter replacing cracked windshields than Toronto, which has six times the population. I have been told this by more than one mechanic who moved out here from back east.



This next sequence of photos was taken on the return trip, coming back into the core along the elevated section.

At left, another view of the spaghetti junction.



Just past Sunalta, about to cross over the transcontinental railroad. Notice the flock of pigeons on the concrete abutment.

Swooping down into the core, overtop Millennium Park (no prizes for guessing when it was built). It was designed for skateboarders and BMXers.

The stately pile on the far side is the Mewata Armoury, headquarters of various Calgary militias.



BWAH HA! HA!: PART 1

by Dale Speirs

Mad scientists are a staple of science fiction, notwithstanding the many lapses in logic that are required for them. A few of the most popular cliches are as follow.

Firstly, there seem to be sex-connected chromosomes linking mad scientist behaviour with daughters. The mothers are never around, usually dead for some reason. The daughter is beautiful, never morbidly obese, and meekly obeys her father until the handsome young hero shows up, at which point the hormones kick in.

Something that I've always wondered about is why mad scientists build fabulously equipped underground lairs in remote localities. Building a lab in a remote area isn't going to hide you from the attention of locals who wonder what is going on there. You might be able to hide a small meth lab in a barn, but if your intent is to launch a space shuttle into orbit, the infrastructure required will not be unnoticed.

Assuming the scientist had a tremendous fortune to pay for it all, how was the place built? Some contractor had to bid on the job, and hire hundreds of workers, yet no one ever blabs about the weird job they did under a tropical volcanic island.

Goldfinger had a giant tableau of Fort Knox hidden under his billiard table that could be rotated into view at the touch of a button. Someone built it for him and would have wondered why he wanted it.

Whenever I watch those 1960s James Bond movies, I wonder if Dr No or the gang at SMERSH worry about meeting the payroll for the janitorial staff and techies. It is said that no man has secrets from his servants. I'm sure Dr No's housekeeper had a fund of anecdotes about him.

If I were a mad scientist building a laboratory, I would build it in an industrial park with good transportation and logistics connections. No one would think twice about such a lab being built in Refinery Row or Chemical Road (every large city has a place with a nickname like that). I would also compartmentalize the operations so that no single employee knew the complete picture.

A good mad scientist would also run a decoy manufacturing operation shipping out products and receiving stock supplies. If you're going to build a thermonuclear bomb with which to rule the world, then set up as a manufacturer of medical scanners that use radionuclides. If you prefer the biochemwarfare route, then set up as a pharmaceutical company.

As far as being a re-animator is concerned, the most obvious place to hide a laboratory would be in a funeral parlor. No one would question those midnight deliveries of corpses, but the peasantry might wonder why those long narrow boxes were always being shipped into the local Baron's castle.

A Mad Scientist Of All Trades.

THE PHANTOM CREEPS (1939) began life as a 12-part theatre serial and then was stitched together into a movie, which explains its episodic pace. My copy of this film is in the 50-movie boxed set MAD SCIENTIST THEATER from Mill Creek.

Dr Alex Zorka, played by Bela Lugosi, is a mad scientist who has assorted devices such as a giant robot, an invisibility belt, spiders that blow up on contact with their victims and paralyze them, and a ray gun. A man of all parts, he is.

Zorka has found a meteorite which contains an element that can destroy entire armies. He has no patience with either the American government or foreign agents trying to buy his stuff. He tries to ignore them until his wife is killed in a plane crash, at which point he goes over the edge. In retaliation, he will destroy the world.

The clean-cut hero (Capt. Bob West, G-man) and his girlfriend (Jean Drew, a plucky newshen) lead the chase hither and yon to bring Zorka and his henchman to justice. An exciting car chase is made more exciting when the viewer realizes that the film negative was flipped over several times when printing the stock.

When the chase begins, Drew is driving and is closest to the camera, with West seated beside her. The vehicle is a standard lefthand drive convertible. As they tear along the country roads, it magically transforms back and forth to a righthand drive, with Drew suddenly on the far side of the vehicle at the steering wheel, as if she were a British driver. The Army is called out to capture Zorka, posse comitatus be damned.

Zorka sends his giant robot out as a delaying action so that he can make his escape. Off to the airport, where Zorka steals a biplane and sets off on a bombing run. He takes out various targets with a supply of superscience hand grenades, cackling maniacally all the while. A single grenade, about the size of a cellphone, takes out an entire factory. He actually does go “Bwah, ha, ha!”, not once but repeatedly.

Zorka then spots a Zeppelin trundling through the skies and blows it up. At this point, stock footage of the Hindenburg disaster is used. Presumably the studio producer thought the audience had short memories, and had forgotten one of the most famous newsreels of history from two years previously.

By then, the Army has all its biplanes up in the air chasing Zorka. He meets his end when his plane crashes into the sea. Considering the explosives Zorka was carrying, the crash should have caused a tsunami up and down the coast line, but only causes a minor splash. And so to the triumphal end credits.

Revenge Is A Dish Best Served Cold.

Mad scientists tend to be vengeful men. Probably all that hazing they took in high school, but it might be something else.

“The Little People”, written by Arch Oboler, is a 1943 episode of the old-time radio (OTR) series LIGHTS OUT. (This and thousands of other OTR shows are available as free downloads at www.archive.org) The mad scientist in question is an explorer who went up the Amazon and studied the headhunting tribes, one of which had developed a technique of shrinking entire bodies down to large dolls about the size of a midget.

On returning home, the explorer finds his wife Ellen carrying on with a handsome young buck named John. She wants a divorce. After poisoning John and tying up Ellen, the professor makes her watch him shrink John down to doll size, using the knowledge he gained in the Amazon. She is next. No one seeing the dolls would realize they were actual corpses.

The mad doctor’s conscience is bothering him. He thinks he can hear the dolls calling him a murderer. He books a ship to South America, and en route tosses the dolls overboard. In doing so, he slips and falls into the water himself. The dolls come to life and drag him down to a watery grave. Revenge is a dish best served wet.

LITERA SCRIPTA MANET AND MAGAZINES OF YORE: PART 4 by Dale Speirs

[Parts 1 to 3 appeared in OPUNTIA #365, 366, and 368.]

Digests: Reprints.

READER’S DIGEST began in 1922 and never looked back, although today the Internet has hurt it like all other print publications. As with any success in any field of endeavour, a flood of imitators soon appeared, a few specimens of which I picked up in the secondhand bookstores of Calgary back in the day when it had dozens of secondhand bookstores.

MAGAZINE DIGEST was a Canadian imitator which printed articles from around the world, more so than READER’S DIGEST. I can find next to nothing in the way of history about MAGAZINE DIGEST on the Internet, although there are a many sellers peddling individual copies. It began in 1929; my earliest issue is 1938 April.

That issue leads off with “Newspapers By Radio”, predicting that within the next few years everyone would get their newspapers sent wirelessly and printed off in their home or office. In short, faxes. This might be considered as one of those new discoveries soon to be in every home but never quite arriving. To be fair though, the industrial capacity of the world was suddenly diverted to other things the following year. Like television, fax machines were a good idea that had to wait because of external factors beyond control.

Most of the articles have not withstood the test of time. The political ones didn’t even survive the next few years as World War Two tossed them into the dustbin of history, much less hanging on for several decades. Articles about famous actors and musicians will require consultation with Wikipedia in order for the modern reader to understand who they were.

The next issue I have is 1948 June, at the beginnings of the Cold War and network television. “Television Ads Will Open Your Eyes” gushes about the wonders that will be, when people can enjoy watching seven-minute commercials that don’t just tell you about a product the way those old-fashioned radio ads did, but actually show you in glorious black-and-white. Imagine seeing with your own eyes a housewife demonstrating a laundry detergent, or a handsome young actor touting a cigarette brand.

Well worth the cost of a television set! This is not irony. The advertisers genuinely believed that television commercials would be a star attraction in their own right. We went through the same thing again in the 1990s, when the rise of the World Wide Web was touted as a method of education, and every advertiser tried to set themselves up as a portal.



Always a war or rumours of war. The third issue of MAGAZINE DIGEST in my library is dated 1952 February. Not much politics by now, just preying on reader insecurities with “Stop The Car Looting Menace!” and “The Smut Peddler Is After Your Child”. The article on “What You Should Know About Baths” no doubt addresses one of the pressing issues of the day, along with “Should Draftees Marry?”.

OMNIBOOK was published from 1938 to 1957 and consisted of four abridgements of recent books. I have one issue dated 1946 November. In that issue, two of the novels were unreadable, and one was a collection of odd facts.

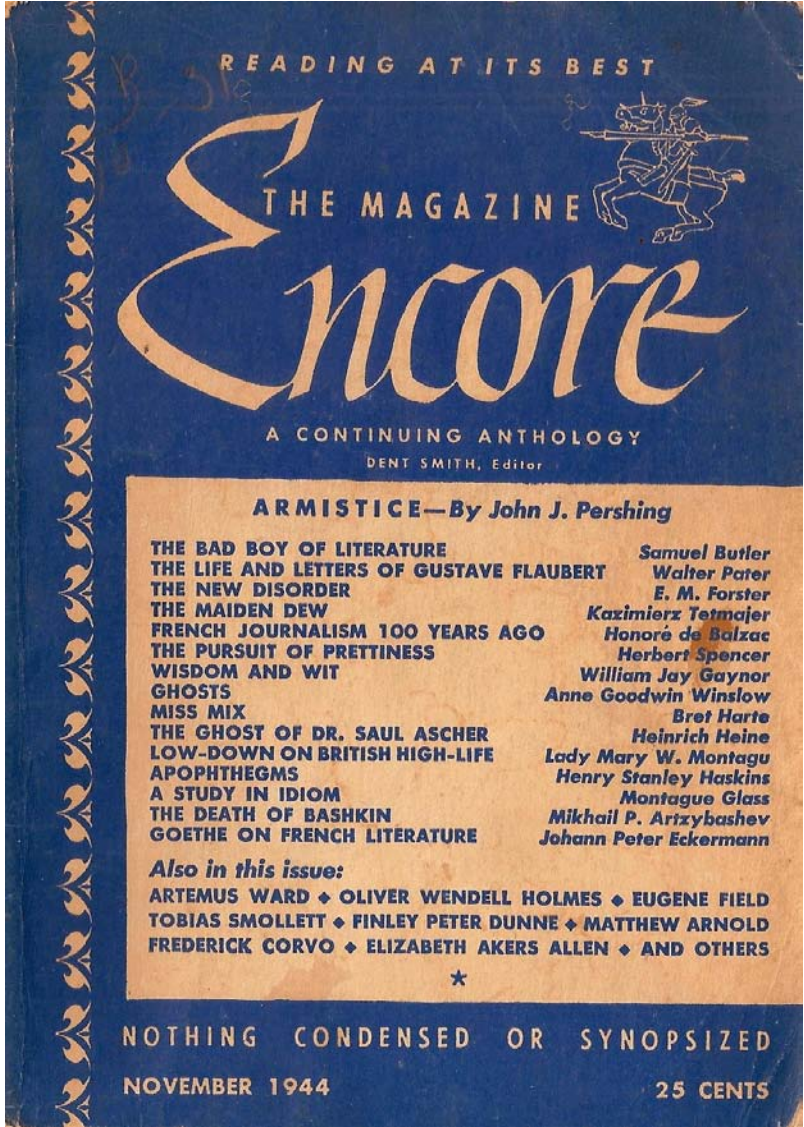
The “book” that I did read was H. Allen Smith’s story “Rhubarb”, about a cat who inherits a fortune and a baseball team. The team considers the cat a good-luck mascot, and the defunct’s daughter is trying to overturn the will. I have a number of books by Smith, a humourist who is forgotten today but who

deserves renewed attention. I reviewed one of his novels, MR ZIP, which skewers Hollywood westerns, in OPUNTIA #68.1D.



ENCORE: A CONTINUING ANTHOLOGY, edited by Dent Smith of Hoboken, New Jersey, began publishing in 1939. A digest wannabe, it saved money on editorial costs by reprinting public domain articles from such authors as Honore de Balzac and Artemus Ward. Indeed, the editor remarks that he doesn't read current periodicals, which explains why all the articles and essays are clipped from the previous generations of writers.

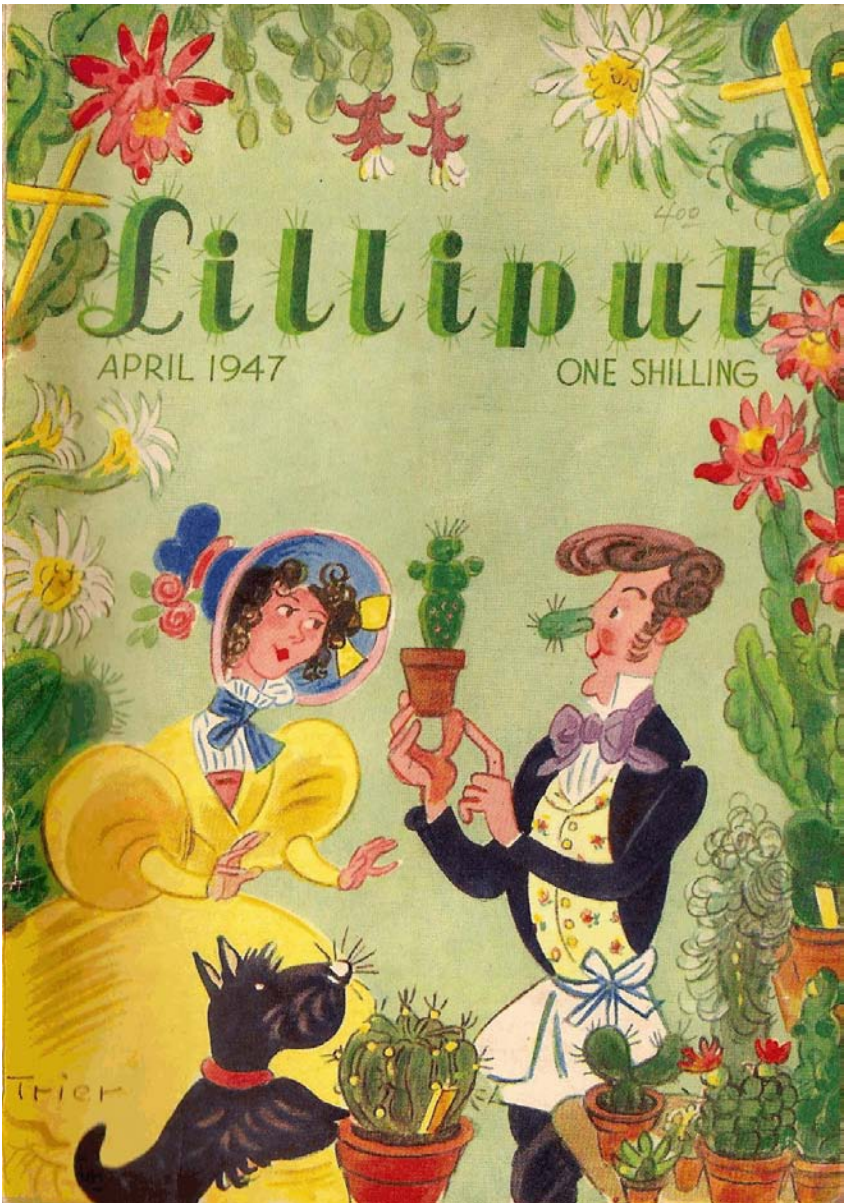
I have only the 1944 November issue, whole number 33. The table of contents lists non-starters such as "The Life And Letters Of Gustave Flaubert", "French Journalism 100 Years Ago", and "Goethe On French Literature". I wasn't inspired to seek out any other issues of ENCORE.



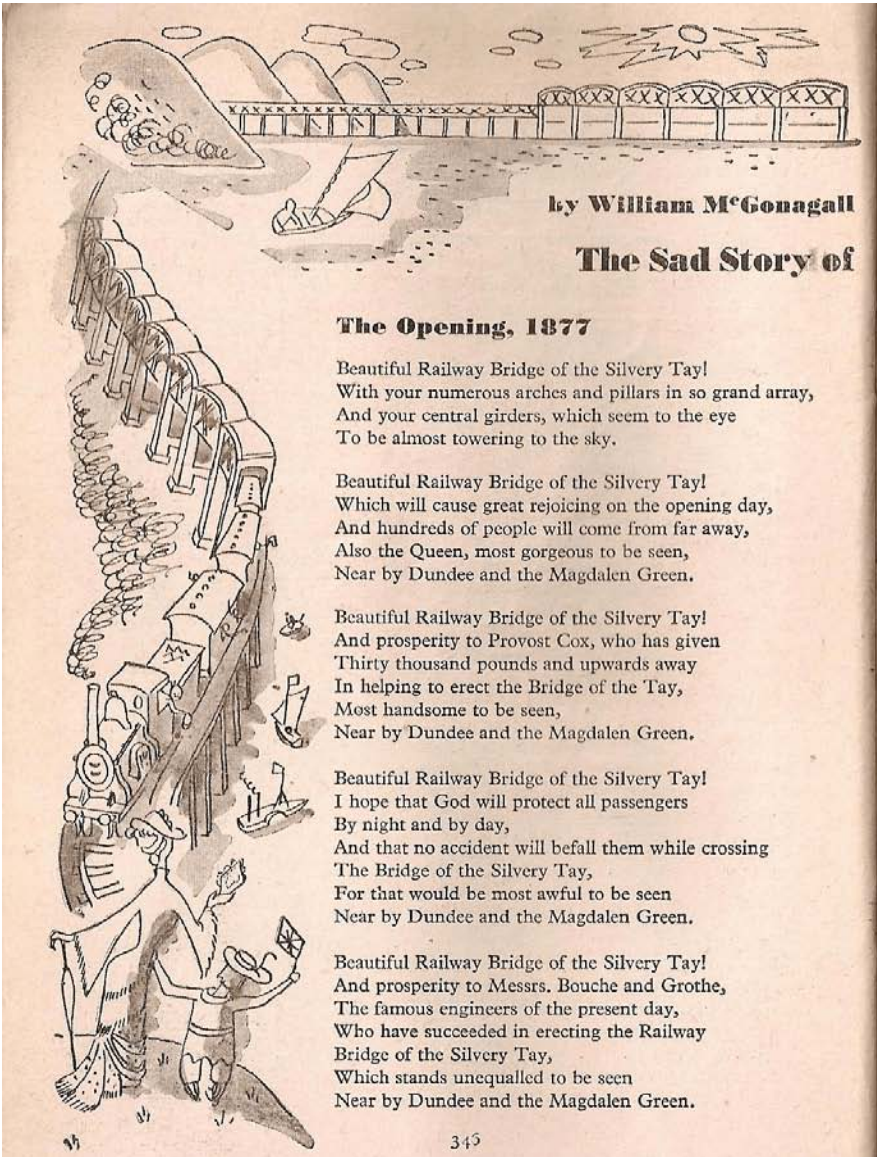
Digests: Original Articles.

The digest size of magazines were popular because of their convenience. Certainly not small enough for a shirt pocket, but suitable for a purse or briefcase, and easy to hold while reading. They were not all compilations clipped from other periodicals.

LILLIPUT is an example. I only bought the one copy, that of 1947 April, and you can see why from the scan of its cover.



LILLIPUT published from 1937 to 1960 a constant compilation of short stories, articles, cartoons, art, poetry, and photographs (including tasteful nudes, to keep up the circulation). The authors were the better class, already established or up-and-coming. The first issue sold 75,000 copies and it peaked at 235,000. The glory years were post-war to 1953. In 1954, management revamped the magazine, increasing its size to contradict the title and gradually converting it into a men's magazine.



by William McGonagall
The Sad Story of

The Opening, 1877

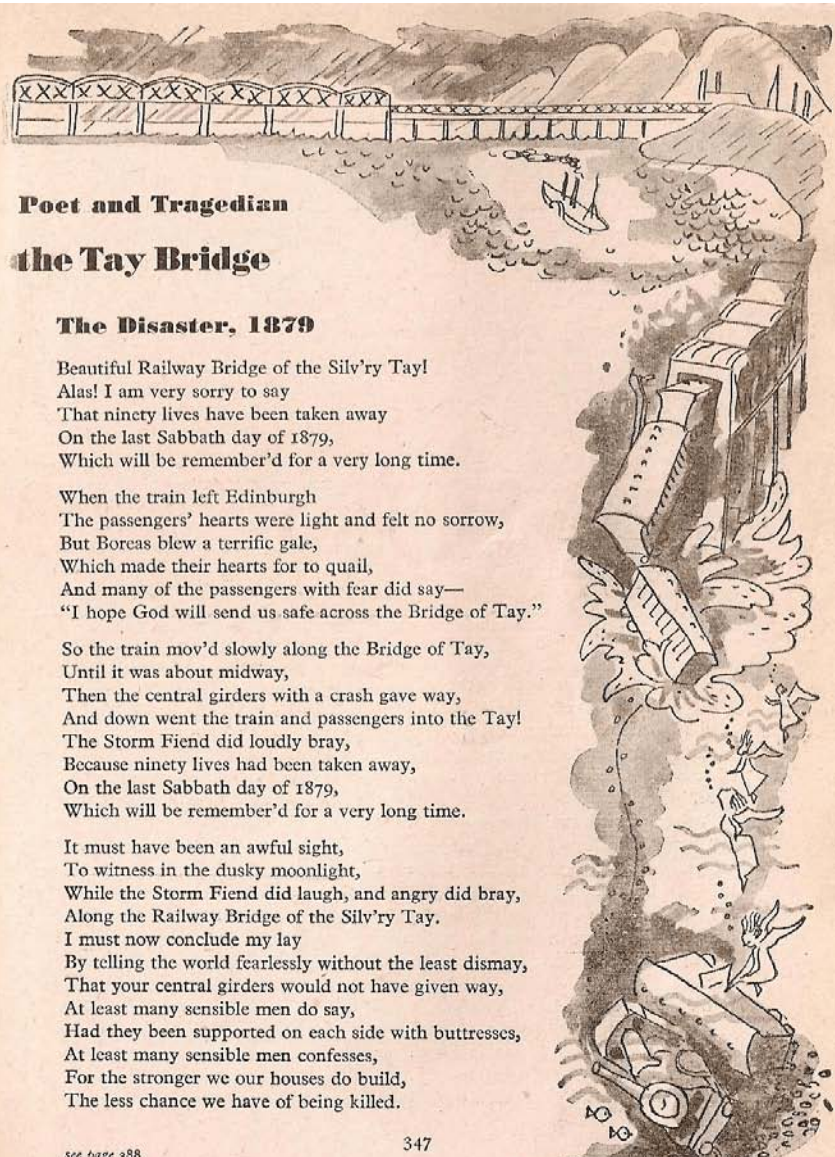
Beautiful Railway Bridge of the Silvery Tay!
With your numerous arches and pillars in so grand array,
And your central girders, which seem to the eye
To be almost towering to the sky.

Beautiful Railway Bridge of the Silvery Tay!
Which will cause great rejoicing on the opening day,
And hundreds of people will come from far away,
Also the Queen, most gorgeous to be seen,
Near by Dundee and the Magdalen Green.

Beautiful Railway Bridge of the Silvery Tay!
And prosperity to Provost Cox, who has given
Thirty thousand pounds and upwards away
In helping to erect the Bridge of the Tay,
Most handsome to be seen,
Near by Dundee and the Magdalen Green.

Beautiful Railway Bridge of the Silvery Tay!
I hope that God will protect all passengers
By night and by day,
And that no accident will befall them while crossing
The Bridge of the Silvery Tay,
For that would be most awful to be seen
Near by Dundee and the Magdalen Green.

Beautiful Railway Bridge of the Silvery Tay!
And prosperity to Messrs. Bouche and Grothe,
The famous engineers of the present day,
Who have succeeded in erecting the Railway
Bridge of the Silvery Tay,
Which stands unequalled to be seen
Near by Dundee and the Magdalen Green.



Poet and Tragedian
the Tay Bridge

The Disaster, 1879

Beautiful Railway Bridge of the Silvery Tay!
Alas! I am very sorry to say
That ninety lives have been taken away
On the last Sabbath day of 1879,
Which will be remember'd for a very long time.

When the train left Edinburgh
The passengers' hearts were light and felt no sorrow,
But Boreas blew a terrific gale,
Which made their hearts for to quail,
And many of the passengers with fear did say—
"I hope God will send us safe across the Bridge of Tay."

So the train mov'd slowly along the Bridge of Tay,
Until it was about midway,
Then the central girders with a crash gave way,
And down went the train and passengers into the Tay!
The Storm Fiend did loudly bray,
Because ninety lives had been taken away,
On the last Sabbath day of 1879,
Which will be remember'd for a very long time.

It must have been an awful sight,
To witness in the dusky moonlight,
While the Storm Fiend did laugh, and angry did bray,
Along the Railway Bridge of the Silvery Tay.
I must now conclude my lay
By telling the world fearlessly without the least dismay,
That your central girders would not have given way,
At least many sensible men do say,
Had they been supported on each side with buttresses,
At least many sensible men confesses,
For the stronger we our houses do build,
The less chance we have of being killed.

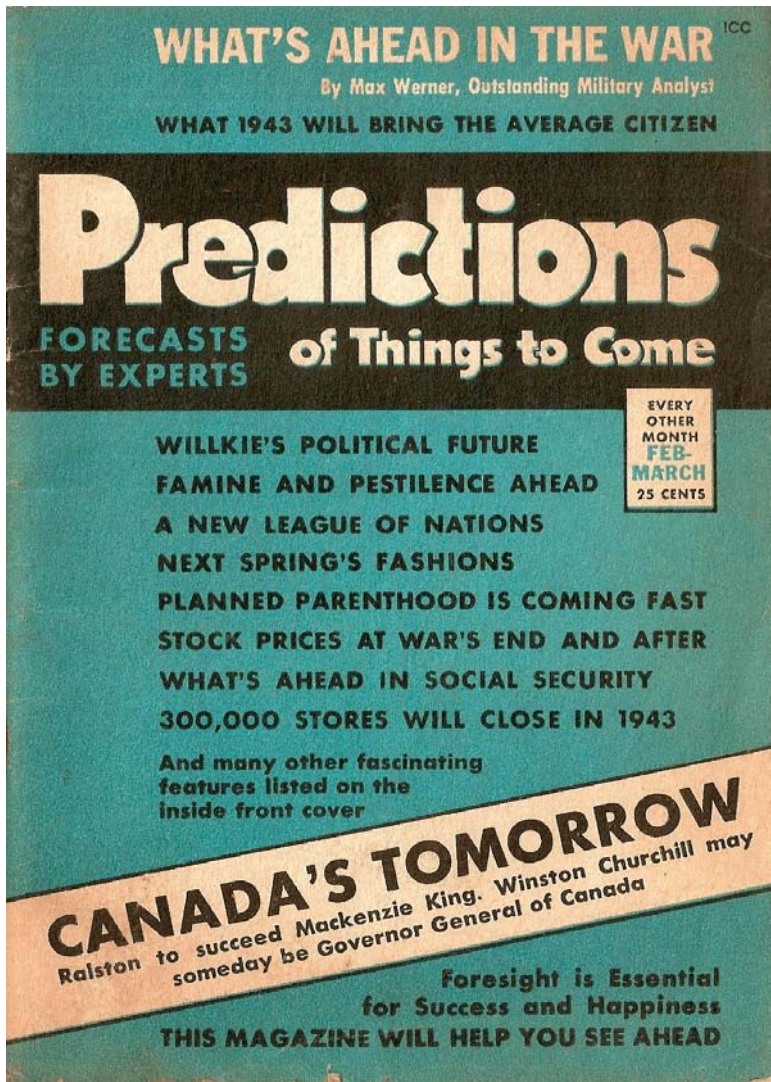
The issue I have has articles that are, shall we say, mildly interesting reading, but nothing noteworthy at this distance in time. Apropos of nothing, there is a reprint of "The Sad Story Of The Tay Bridge" by William McGonagall, considered to be the worst poet ever published in Scotland. I would be remiss in my duty if I didn't include a scan here.

The Tay Bridge disaster at Dundee, Scotland, occurred on 1879-12-28 when the bridge over the Tay estuary collapsed during a gale while a passenger train was on it. At least 75 people died, but because ticket sales didn't necessarily indicate who got on or off before the train went over the bridge, there may have been as many as 90 people. The wind was blowing broadside to the bridge.

As the train entered the high girders at the centre of the bridge, which formed a cage over the tracks, the wind picked up the train and threw it against the side of the girders, causing the entire structure to topple off the piers with the train inside. The waters were deep, the storm raged all night, and it was many hours before first-responders arrived. For days afterwards, bodies and mailbags floated ashore.

PREDICTIONS OF THINGS TO COME was a digest published by The Parents' Institute Inc of New York City. Their stable of magazines dealt with parenting and children's fiction of the purest kind, so this title was a bit odd. Stephen Leacock wrote that one should never make predictions that would be disproved within the prophet's lifetime. Always set your predictions after you are safely dead and cannot be embarrassed.

It is entirely too easy to take potshots at all the incorrect predictions in this issue. I have only one issue, #2, dated 1943 Feb/Mar. The near-future predictions were obviously more accurate than those for the postwar era, such as a universal world calendar.



One author bravely forecast that Hitler was going to lose the war. "Canada's Tomorrow" forecast a man as Prime Minister who instead vanished into obscurity.

The author also worried that the francophones would outbreed the anglos and take over the country, and predicted that Winston Churchill would be Governor-General.

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: Theo Nelson
Calgary, Alberta

2017-03-20

[On the next page is the view side of Theo Nelson's quarterly postcard, celebrating the equinoxes and solstices. This one is the 2017 vernal equinox.]





FROM: Milt Stevens
Simi Valley, California

2017-03-19

I very much enjoyed your articles on THE MAN FROM UNCLE in issues #361 to 364. It was my favorite television show in the period just before I joined the Navy in February 1966. I had graduated from college in June 1965 and hadn't paid much attention to the first season. Many people at LASFS were talking about the show including David McDaniel [author of several TMFU novels]. Since I met him in person, I've always thought of him as Ted Johnstone. After joining the Navy, I could no longer keep track of the series.

My favorite episode of the TV series show was "The Alexander the Greater Affair". In that episode, Mr. Alexander is going to conquer the world in a plot that involves violating all ten of the commandments. It takes a lot of ingenuity to violate all ten commandments in a single operation. The episode was written by Marion Hargrove who also wrote "See Here Private Hargrove". The series had some first-rate writers.

Terry Carr was the editor of the paperback series which explains some of the fannishness that crept in. Dave McDaniel put all sorts of fans and fannish references in his books. This many years later, I've probably forgotten many of them. I do recall that the dagger in "The Dagger Affair" came from a Don Simpson comic strip in FAPA. Dagger stood for Destruction A Go-Go and Electronic Revenge. It's never explained in the book, but it would have made sense with the plot.

My experience with steam punk is limited to Girl Genius, so your article, "Steampunk Reviews" was entirely new information for me. Steampunk sounds entertaining, but I have no idea when I am going to get around to reading any of it. There are simply too many potentially interesting things to read. I've wondered about the popularity of steampunk. I suspect many people are baffled by modern technology. They'd like to understand, but they don't. So they like reading about a technology they could probably understand if it existed. That seems perfectly reasonable.

[Steampunk is something a hobby mechanic can do. My father and uncles, and their father before them, could repair tractors on the farm. Modern tractors have more computer chips than a desktop. Every city had a multitude of backyard mechanics back when. My first car was a 1971 Volkswagen Beetle. I'm no mechanic but I could change the ignition points myself with a screwdriver and

a pair of pliers. Today, all modern vehicles are computer chipped in multiple places, and one has to call in a technician. Years later, I had a Nissan Micra that suddenly died in traffic. A computer chip burned out on the engine but there was no way to diagnose that out on the street, much less replace it. It cost me an expensive tow into the dealership to get a new chip installed. It is easy to see why steampunk can appeal.]

FROM: Lloyd Penney
Etobicoke, Ontario

2017-03-19

OPUNTIA #368: Just recently, Montréal was smacked with a helluva wind storm and 75cm of snow. From the Hamilton area, straight down to Niagara Falls, they received a huge blast of winter. And here is Toronto in between, with not a flake on the ground. We have been extremely lucky. Still, that groundhog is an endangered species around here, with yet another crappy set of predictions. Tomorrow is the first day of spring, and it sure doesn't feel like it.

The World Wide Party is on our calendar! I wish it was possible to get back in touch with both Benoit and Franz, so see how life has treated them. I suspect both of them have left fanzines behind, but have left something for us to enjoy, to remember them by.

Excellent light displays at the Calgary Glow Festival. Toronto real estate is priced beyond ridiculous, so we really don't have a lot of open public areas, although Dundas Square might do the trick for something similar.

It looks like the POCKET BOOK MAGAZINE was an attempt to draw on the popularity of READERS' DIGEST at the time. I still see READERS' DIGEST in my doctor's waiting room, although to be honest, I don't know if anyone subscribes to it any more.

OPUNTIA #369: It does get to the point where I see the Keep Calm... signs, and they simply don't register with me any more. I think they have lost their appeal. I used to have an app for my tablet that would let me fill in a Keep Calm... poster of my own design. That lost its charm fast.

My previous letter: there are a number of record and CD stores left in Toronto, but many of them are specialty and collector's stores. I can't remember when I last bought a CD, and if we buy DVDs, it's through a website like Amazon.

[I spoke with a clerk at HMV and he said that Sunrise Records is buying two of their outlets in the cheaper parts of Cowtown to operate as vinyl stores. The clerk also told me that he and his co-workers were actually full-time clerks at Walmart and were picking up a few dollars moonlighting during HMV's closing-down sale.]

OPUNTIA #370: I think there may have been stories like the Jeffty style of stories you describe in some of the Twilight Zones, especially the remake series from the 1980s.

The H.T. Webster cartoons made me smile. I remember my own father napping on the couch, the TV going, and four or five empty mugs where my mother had brought him tea.

Unfortunately for the horror writers, and I know a few locals, most if not all horror just makes me laugh, or sometimes, roll my eyes. Not my literature, I guess.

Word of the old Zeppelin pulps makes me think that with today's interest in steampunk, those pulps could be reprinted, and sold to the steampunks. I suspect most of them would enjoy them.

I worked as registration assistant/usher/fulfillment clerk at the Real Estate Wealth Expo, where the wealthy American-based shysters dangle the temptation of wealth in front of you. Then they get rich by selling you over-priced seminars and classes. I wanted to leave, but I got paid for it, so...

The irony of the day was that while this real estate expo was going on in the MTCC north building, the annual Toronto ComicCon was going on in the south building. We attended that last year, and had somewhat of a good time. I saw so many of the puffed-up, self-important entre-pren-ooers in ill-fitting suits, and then I saw Captain America and various anime costumes that had come up from the south building. I wondered which group had the funniest costumes.

SEEN IN THE LITERATURE

Cai, Z., et al (2016-09-13) **Discovery of an enormous Lyman-alpha nebula in a massive galaxy overdensity at $z = 2.3$** . Preprint from arXiv:1609.04021v1 [astro-ph.GA], www.arXiv.org

Speirs: I'll put my comments ahead of this abstract because it requires some astrophysics knowledge. When the Big Bang cooled off 13 gigayears ago, it resulted in energy condensing into matter, a soup of subatomic particles, which in turn eventually cooled further to form atoms.

Most of the subatomic particles that built the atoms were protons and neutrons, part of the baryon family of particles. There were, of course, many other types of particles, but they are minor players in the subject of this paper. The newborn matter was not uniformly distributed throughout the universe; it was lumpy and filamentous. Gravity caused the lumps to congeal, begin spinning, then condensing to produce clusters of galaxies.

Astronomers looking into the depths of space have found some of these lumps and filaments at the 10 billion light years mark, which also means that they are 10 gigayears old. These lumps are called Lyman-alpha nebulae. (I can't figure out how to produce Greek letters on my computer, so I will spell out alpha, sigma, etcetera.) Those lumps have long since condensed into galaxies but we will never see them, since the human race won't be around 10 gigayears from now when their light finally reaches our galaxy.

This paper reports the discovery of a lump called Mammoth-1, which is 442,000 parsecs in diameter. One parsec equals 3.26 lightyears. For comparison, our Milky Way galaxy is 30 parsecs in diameter, and the observable universe about 28.5 gigaparsecs. Mammoth-1 is embedded in a cloud of baryons called Boss 1441. In real time, it has long since condensed into a cluster of galaxies.

Authors' abstract: "*Enormous Lyman-alpha Nebulae (ELANe), unique tracers of galaxy density peaks, are predicted to lie at the nodes and intersections of cosmic filamentary structures. Previous successful searches for ELANe have focused on wide-field narrowband surveys, or have targeted known sources such as ultraluminous quasi-stellar-objects (QSOs) or radio galaxies.*"

"Utilizing groups of coherently strong Lyman-alpha absorptions (CoSLAs), we have developed a new method to identify high-redshift galaxy overdensities and

have identified an extremely massive overdensity, BOSS1441, at $z = 2-3$. In its density peak, we discover an ELAN that is associated with a relatively faint continuum. To date, this object has the highest diffuse Lyman-alpha nebular luminosity of $L_n = 5:1 \pm 0:1 \times 10^{44} \text{ erg s}^{-1}$. Above the 2 sigma surface brightness limit of $SB_{\text{Lyman-alpha}} = 4:8 \times 10^{-18} \text{ erg s}^{-1} \text{ cm}^{-2} \text{ arcsec}^{-2}$, this nebula has an end-to-end spatial extent of 442,000 parsecs.”

“During the peak epoch of galaxy formation at $z = 2-3$, most of the baryons in the Universe reside outside galaxies; they lie within the intergalactic medium (IGM) and circumgalactic medium (CGM). The IGM and CGM provide a vast reservoir for fueling the star formation of galaxies and also serve as a sink for metals driven from the galactic feedback. On the other hand, the properties and structures of the IGM/CGM, such as kinematics, morphology, and metallicity, are increasingly reshaped by the energetic processes occurring in galaxies, and therefore the IGM/CGM acts as a laboratory to stringently constrain the physics of the galaxy formation.”

Olson, S.J. (2017) **Estimates for the number of visible galaxy-spanning civilizations and the cosmological expansion of life.** INTERNATIONAL JOURNAL OF ASTROBIOLOGY 16:176-184

Author’s abstract: “If advanced civilizations appear in the universe with an ability and desire to expand, the entire universe can become saturated with life on a short timescale, even if such expanders appear rarely. Our presence in an apparently untouched Milky Way thus constrains the appearance rate of galaxy-spanning Kardashev type III (K3) civilizations, if it is assumed that some fraction of K3 civilizations will continue their expansion at intergalactic distances.”

“We use this constraint to estimate the appearance rate of K3 civilizations for 81 cosmological scenarios by specifying the extent to which humanity is a statistical outlier. We find that in nearly all plausible scenarios, the distance to the nearest visible K3 is cosmological. In searches for K3 galaxies where the observable range is limited, we also find that the most likely detections tend to be expanding civilizations who have entered the observable range from farther away. An observation of K3 clusters is thus more likely than isolated K3 galaxies.”

Speirs: The Fermi Paradox (Where are they?) is a subfunction of the Drake Equation (How many are there?). Just to find the upper and lower limits of the variables in the Drake Equation is extremely difficult. As Drake himself pointed out, his equation is intended more to focus research rather to be ever solved.

Airapetian, V.S., et al (2017) **How hospitable are space weather affected habitable zones? The role of ion escape.** ASTROPHYSICAL JOURNAL LETTERS 836(1):L3

Authors’ abstract: “Atmospheres of exoplanets in the habitable zones around active young G-K-M stars are subject to extreme X-ray and EUV (XUV) fluxes from their host stars that can initiate atmospheric erosion. Atmospheric loss affects exoplanetary habitability in terms of surface water inventory, atmospheric pressure, the efficiency of greenhouse warming, and the dosage of the UV surface irradiation. Thermal escape models suggest that exoplanetary atmospheres around active K-M stars should undergo massive hydrogen escape, while heavier species including oxygen will accumulate forming an oxidizing atmosphere.”

“Here, we show that non-thermal oxygen ion escape could be as important as thermal, hydrodynamic H escape in removing the constituents of water from exoplanetary atmospheres under supersolar XUV irradiation. Our models suggest that the atmospheres of a significant fraction of Earth-like exoplanets around M dwarfs and active K stars exposed to high XUV fluxes will incur a significant atmospheric loss rate of oxygen and nitrogen, which will make them uninhabitable within a few tens to hundreds of Myr, given a low replenishment rate from volcanism or cometary bombardment. Our non-thermal escape models have important implications for the habitability of the Proxima Centauri’s terrestrial planet.”

Speirs: Unfortunately it appears that constant, extremely powerful flares from Proxima Centauri make its planets uninhabitable.