

OPUNTIA 439



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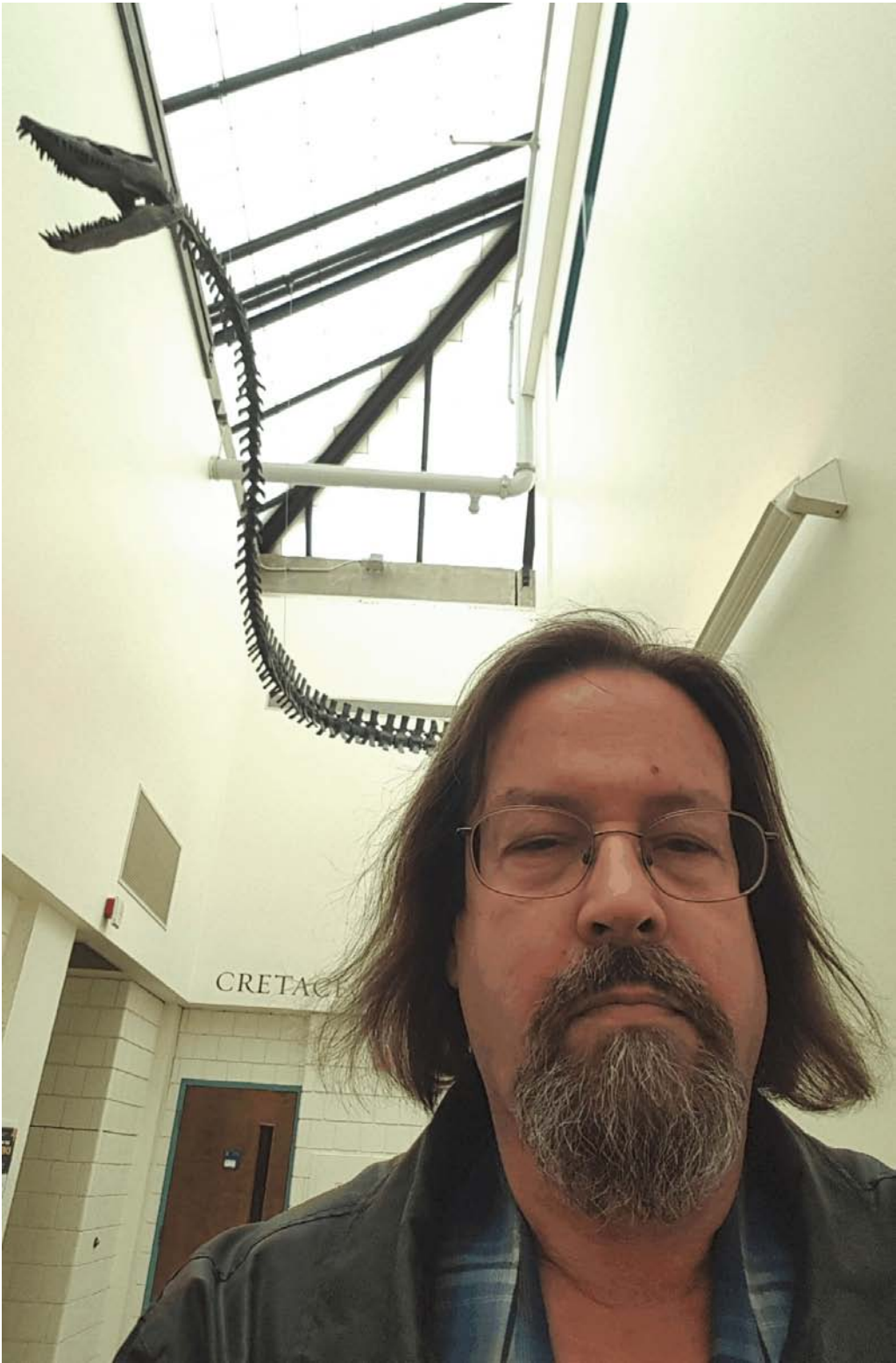
PALEO 2019

by Dale Speirs

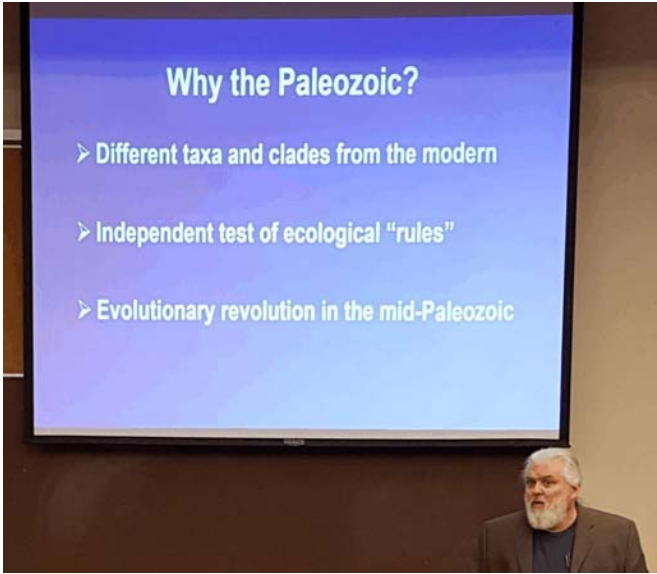
2019-03-23

I am a member of the Alberta Palaeontological Society, which is headquartered here in Calgary at Mount Royal University. Their annual convention is held during spring break because in the summer most of its professional members are out digging for fossils somewhere. Amateurs such as myself are quite welcome as members. Palaeontology is one of the few remaining sciences (astronomy is another) where amateurs can still make significant discoveries.

This year's event took place at the university on the weekend of March 23 and 24. See OPUNTIA #408 for a report on last year's convention. At right, I pose with a friend in a university hallway, a plesiosaurus of the type found in Alberta 75 megayears ago when our province was under the Bearpaw Sea. And so away to the seminars for this year.



“Paleozoic Predation: Still Matters After All These Years.”



Dr. Lindsay Leighton works in the Department of Earth and Atmospheric Sciences at the University of Alberta. He spoke on the race between predators and prey, using an enigmatic group of shelled animal known as strophomenates.

The strophomenates first appeared in the Devonian era 419 megayears ago.

At that time they had smooth or ribbed shells. When fish evolved strong enough jaws that they could bite through shells, that set off an evolutionary arms race.

Many of the shells found as fossils had bite marks and subsequent distorted growth as the new layers of the shell grew around the wound. By the Carboniferous period 371 megayears ago, smooth and ribbed species were extinct, replaced by shells heavily armed with spines.

“The World’s Most Famous Bird: The Story Of Archaeopteryx.”

Jon Noad works at Gran Tierra Energy and the Earth and Atmospheric Sciences Department at the University of Alberta. He discussed the thirteen known *Archaeopteryx* specimens, plus a single feather that came from an unknown dinosaur at the branching point of bird evolution. They come from Jurassic limestone deposits north of Munich.

Archaeopteryx were about the size of magpies, and probably black-and white birds as well, based on mineralogical studies of the feathers. They lived in tropical lagoons or breakwaters, and could glide or flutter but not fly as freely as modern birds. Their bones are similar to pheasants and turkeys, which can’t fly steadily but can flap along for short distances to escape predators.

The most famous specimen, now in a Berlin museum, was originally traded for a cow. When Noad mentioned that, he got a good laugh from the audience. However, being an old cowhand myself, I didn’t see that as a bad deal. In today’s depreciated currency, a stock cow costs about \$5,000 and a registered purebred could go for five digits. So for someone a couple of centuries ago to trade a useless slab of rock for a cow wasn’t so bad.



“Earliest Carboniferous Ray-Finned Fishes From Blue Beach, Nova Scotia.”

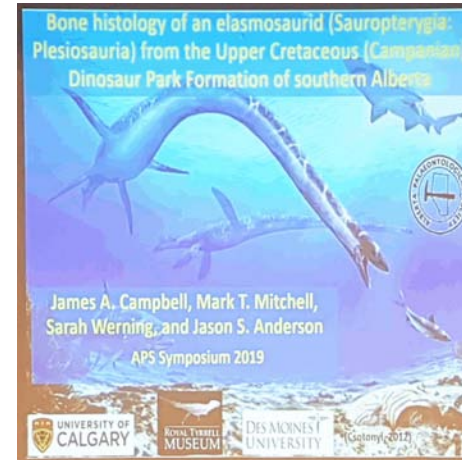
Conrad D. Wilson is a graduate student in the Department of Biological Science at the University of Calgary. He didn’t spend that much time on the actual Nova Scotian fossils, instead discussing the sudden and massive change in fish evolution between the Devonian and the Carboniferous, when they went from armoured plated fish to the modern scaled bony fish of today.

Earliest Carboniferous Ray-finned Fishes from Blue Beach, Nova Scotia

Conrad D. Wilson

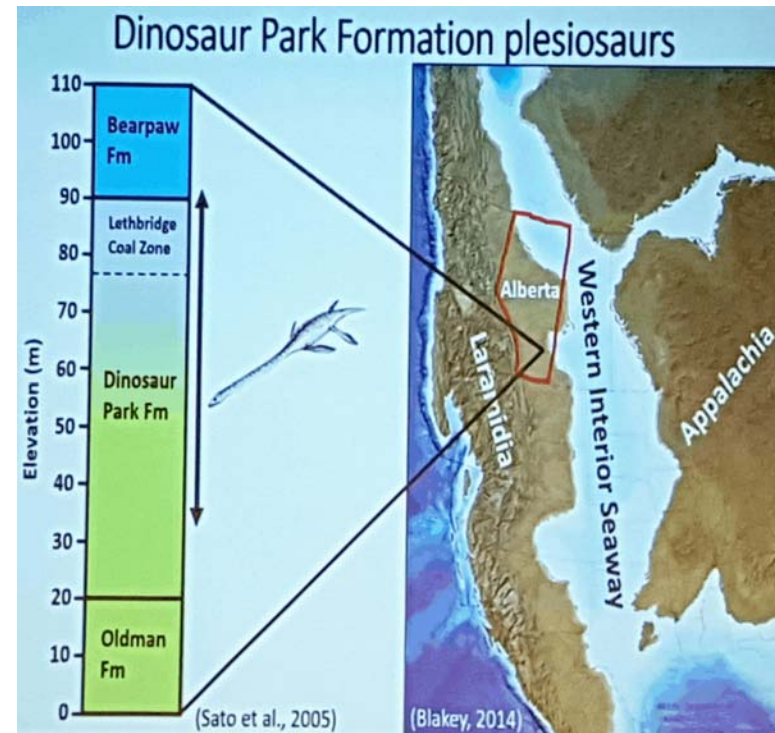
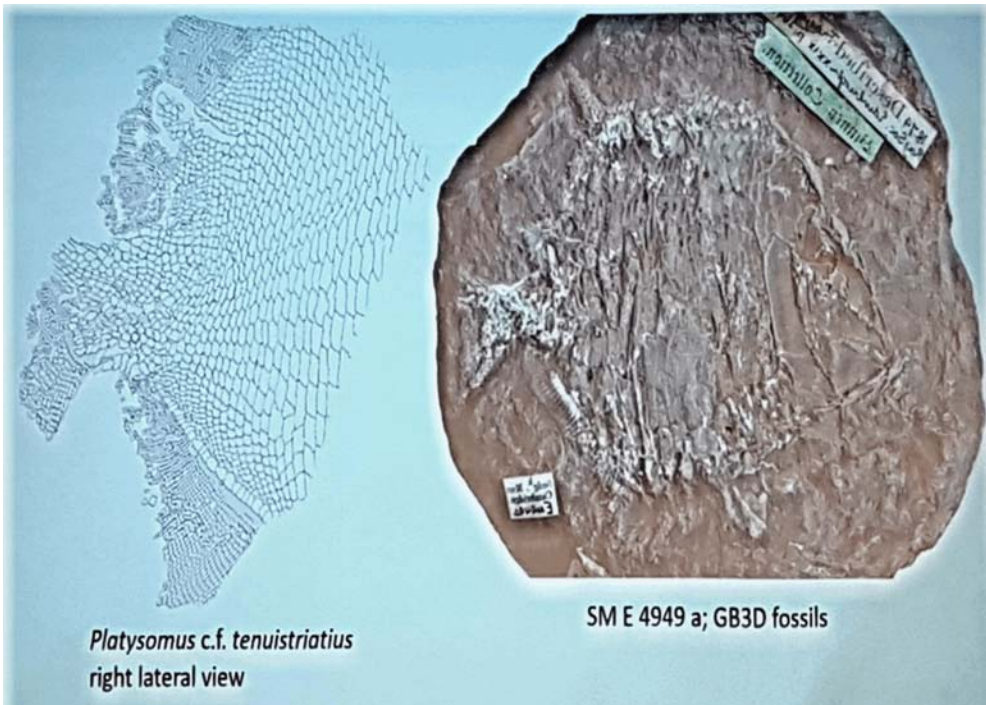


“Histological Analysis Of Elasmosaurid (Sauropterygia: Plesiosauria) Specimens Reveals The Presence Of A Small-bodied Taxon From The Non-Marine Dinosaur Park Formation.”



James Campbell is a graduate student in vertebrate paleontology at the University of Calgary. He was studying the smaller plesiosaurs that frequented the Alberta sea during the Cretaceous.

By examining bone cross-sections, he could tell the age of the animal because bones have annual growth rings. At least one pregnant plesiosaur skeleton has been found in Alberta, enabling a comparison between male and female bone structure and fetal bones. (They were livebearers, not egg layers.)



“An Unusual Microsite Reveals The Hidden Fauna Of The Horseshoe Canyon Formation.”

Greg Funston is a PhD graduate student in the Department of Biological Sciences from the University of Alberta. He started off by mentioning how drones are a boon when fossil hunting in the trackless wastes of the Red Deer River badlands.

The arrow in the photo below points to his drone, and the photos along the right side are the different types of sensor images obtained. Strangely enough though, he was hunting microfossils, but used the drone to map the geological strata far faster than by trudging up and down the hills.



These were some of the small stuff he was looking for, such as scales and teeth from baby dinosaurs.



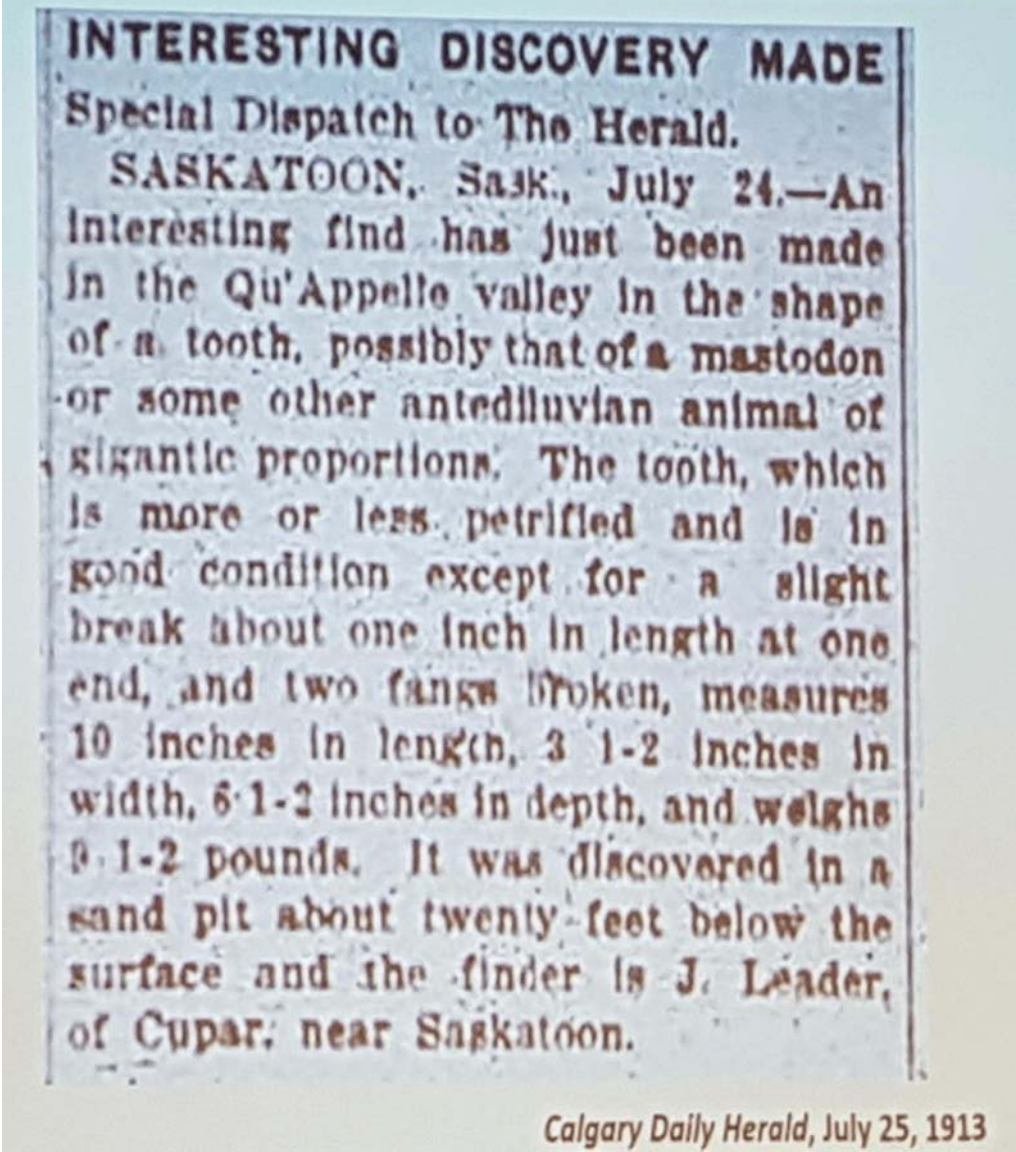
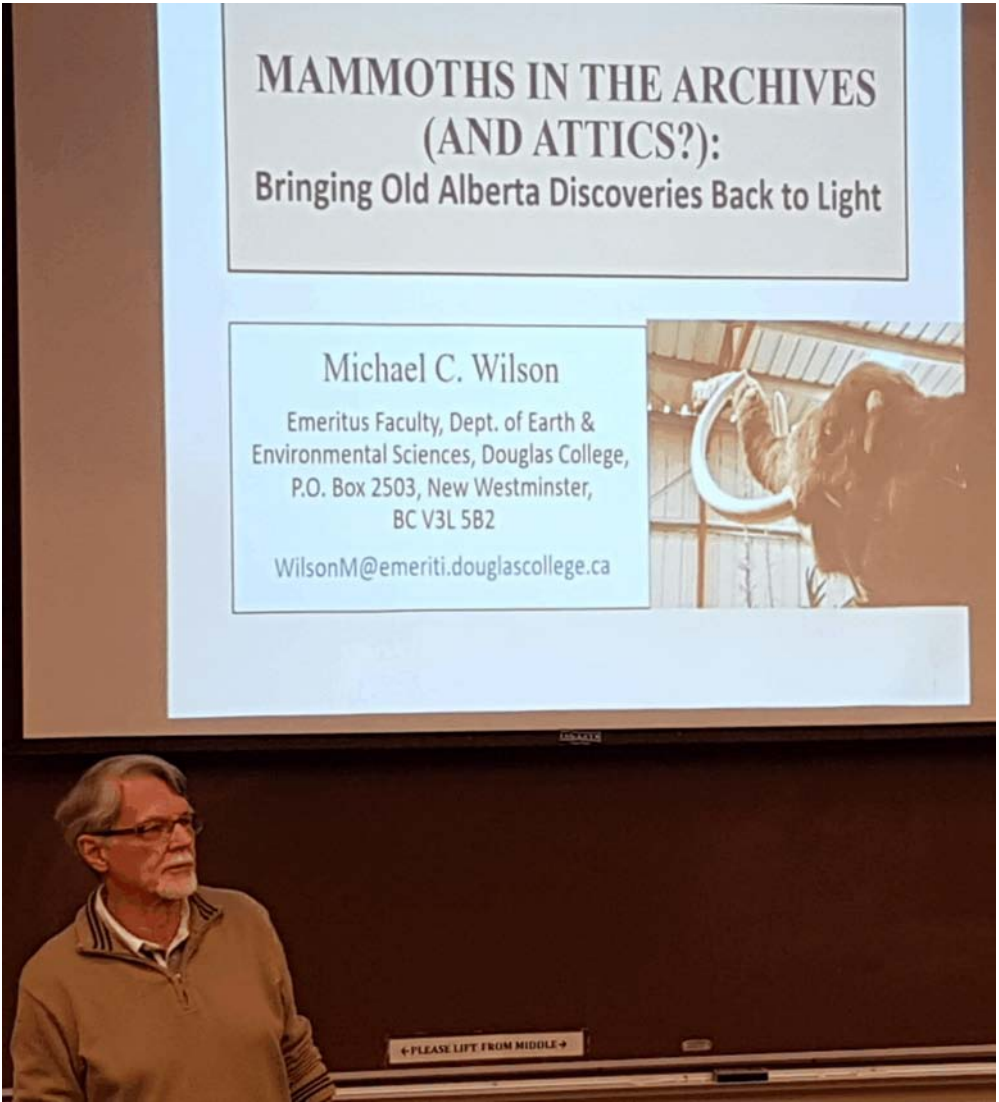
“You’re A Strange Animal: Morphology Of Cambrian Stenothecoida.”

Dr. Paul E. Johnston works in the Department of Earth and Environmental Sciences at Mount Royal University. Stenothecoids were shells that looked like bivalves but were not. They had toothed hinges, unlike every other shell group. Instead of sucking in water for oxygen and nutrients, then blowing it out the same way after, they sucked in water through the hinges and out a gap at the other end, processing the nutrients in linear flow. Nobody knew how to classify them because they were definitely not molluscs.

“Mammoths In The Archives And Attics: Bringing Old Alberta Discoveries Back To Light.”

Dr Michael Wilson is Professor Emeritus at Douglas College, New Westminster, British Columbia. He has been engaged in historical research, going through old newspapers and investigating folklore about fossil finds, then trying to track down the specimens.

Aboriginal tribes observed fossils and knew that once there had been giants in the land. Earlier settlers found more, as did railway workers cutting grades for tracks, and city real estate developers opening gravel pits.



“Valleys Of Hidden Secrets: Why Saskatchewan Is Canada’s New Fossil Frontier.”

Dr. Emily Bamforth is the Assistant Curator of Palaeontology at Royal Saskatchewan Museum at the T. Rex Discovery Centre, Eastend, Saskatchewan. That province has been overshadowed in the fossil field by Alberta, so she showed what Saskatchewan palaeontologists were finding.

The first dinosaur fossil ever found in Canada was in 1873 in what is now Grasslands National Park in southern Saskatchewan. She mentioned the tyrannosaurid dinosaur *Edmontonosaurus saskatchewanensis*, which is a funnier name to Canadians, since Edmonton is the capital of Alberta.

Poster Sessions.

As is common at many scientific conferences, there was a poster display for scientists to show off their work. Below is Dr Georgia Hoffman, who has been studying plant fossils collected by my mother Betty (1931-2002). The University of Alberta has a warehouse full of Palaeocene fossils collected by her, and it will take decades to go through them all.



Miscellaneous.

The audience was much younger on average than a typical general science fiction convention. Many youngsters, who listened with great interest to the lectures. One thing I liked about Paleo 2019 was that there was only one track of seminars, so everyone shared a common experience instead of hiving off into their own specialties. The attendance at the seminars was about 100 to 150 people, not including those who were elsewhere at the posters or dealer bourse.



And who could resist this table display in the bourse?

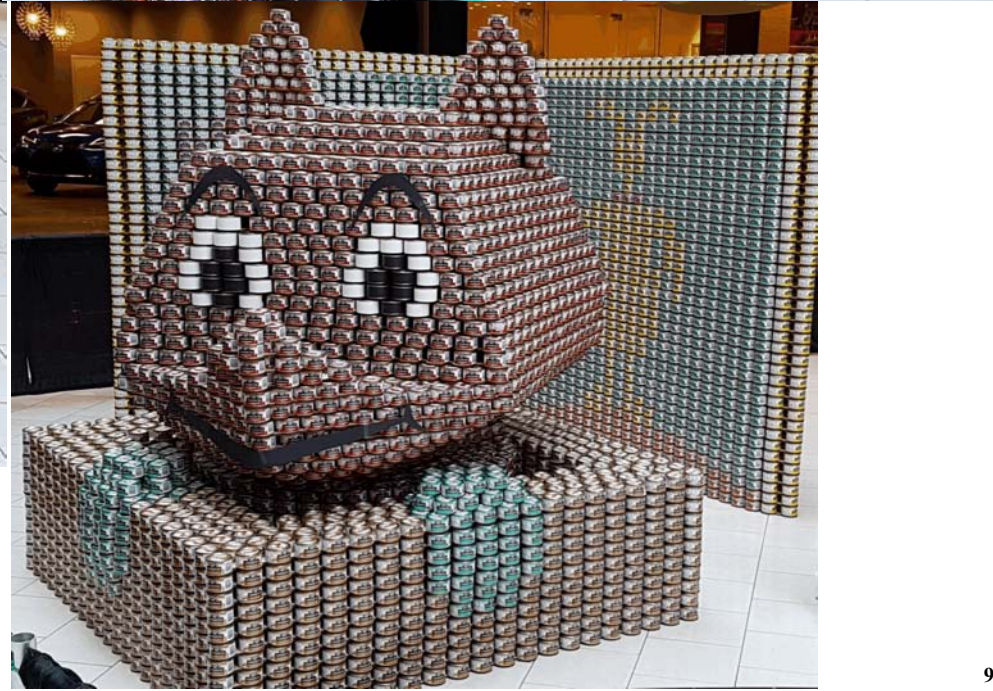


CANSTRUCTION CALGARY: PART 2
photos by Dale Speirs

[Part 1 appeared in OPUNTIA #409.]

Canstruction is an annual competition every March, held at the Southcentre Mall in the Deep South Calgary district. Companies make sculptures by stacking food cans. After the event is over, the cans are donated to the local food bank. Last year's theme was Easter; this year it was Dr Seuss.







WHEN WORDS COLLIDE 2019

Calgary's annual readercon When Words Collide will be held on the weekend of August 9 to 11, 2019. The venue is the Delta South Marriott hotel on Southland Drive SE on Bonaventure Drive. A writing-centred convention, with an excellent dealer bourse where only books can be sold. My reports on previous WWCs can be found in OPUNTIA's #71, 253, 266, 282, 318, 350, 387, and 421.

The membership is capped at 750 plus volunteers and guests, and always sells out by June, as do room reservations and banquet tickets. More details from: www.whenwordscollide.org

WHAT MIGHT HAVE BEEN: PART 2

by Dale Speirs

[Part 1 appeared in OPUNTIA #40.1.]

Canadian alternative history has a tough time in foreign markets because their ignorance of our history makes it difficult for authors to assume the audience knows the background of our real timeline. There might be a few American aviation enthusiasts who vaguely recall the Avro Arrow. Only a handful of non-Canadians worldwide can instantly identify Louis Riel.

On the other hand, alternative histories for the world wars or the American Civil War have a large ready-made audience who know who Robert E. Lee was or why Hitler should never have invaded the Soviet Union.

Canadian Alternatives.

Hayden Trenholm has edited an anthology of Canadian alternative histories and science fiction in 49TH PARALLELS (2017), which I bought at last year's When Words Collide, Calgary's annual readercon.

It opens with "Order" by Liz Westbrook-Trenholm, about what might have been had the WW2 government of Canada had the backbone to initiate its own Tube Alloys project. In our timeline, the Liberal government of the day was viciously anti-Semitic and kept out physicists who instead found safe haven in the USA. This story posits that instead there were some bureaucrats who made workarounds to bypass the bigots and made Canada the first to get the atomic bomb.

"The Treaty Of Empress Park" by Claude Lalumiere posits Southern Ontario as a province of the Chinese Empire, which is about to lose it to Montreal (an independent city state), assuming New France, the Aztec Empire, or the New England Commonwealth don't grab it first. There are airships, so that makes it alternative history. The story fills in the background as it relates the treaty negotiations from different viewpoints in turn. There is a twist ending.

"Shoot For The Stars" by Andrew P. Blaber is about a Canadian electromagnetic launch system, a space gun. In our timeline, the modern space gun was developed by Canadian engineer Gerald Bull, until he was assassinated in 1990 by the Mossad.

This alternative history saw the gun finally succeed with a manned spacecraft, using a liquid-breathe system to keep the astronauts from being killed by the shock. A twist added at the end was too much, when the orbiting spaceship suddenly started up hitherto unmentioned fusion engines and went roving to the planets.

"Not Valid For Spain" by Kate Heartfield began in Toronto in 1937. The robots were holding a strike meeting at the union hall. A young man from Vancouver volunteered for the Mackenzie-Papineau Battalion (Canadian volunteer brigade which existed in our timeline) to fight in the Spanish Civil War. Even there the robots were replacing humans. Spain was a testing ground for World War Two in our timeline. In this alternative history, it was still a testing ground but for something else.

"You, Robot" by Melissa Yuan-Innes is a medical story with robots treating patients. Routine science fiction. Lots of medical jargon which must be accurate since the author is an emergency ward surgeon.

"The Last Best Defense" by Brandon Crilly is set in Manitoba where Louis Riel and the Metis had joined with the Mounties to fight a common enemy. The first Riel Rebellion of 1869 had been interrupted by alien invaders. The Mounties weren't formed until 1873 but this story is presumably set several years after the invasion.

The aliens came through portals into European cities where they quickly triumphed, but weren't prepared when one of their portals opened into Manitoba, which even among Canadians is noted for its brutal winters. The story is more a vignette about a skirmish with one of the aliens.

"The Cicada Year" by Eileen Gunnell Lee considered the consequences when cicadas became omnivorous and annual. Instead of sucking sap from tree roots for 17 years, they burrowed into animals, including humans.

"Where The Water Meets The Land" by Caitlin Demaris McKenna is a science fiction story set in British Columbia where a forest ranger and his robot rescue a driver whose car slid off a mountain road during a blizzard. The driver had a cooler containing live salmon eggs, definite contraband. The ranger decided to enforce the law in ways not according to the bureaucrats in their comfortable offices in the big city.

“Harvesting Moonshine” by M.L.D. Curelas is an alternative history about a Canadian spy who infiltrated the American atomic bomb warehouse and disabled the devices. The story was set in the early 1960s. The divergence was that Lester Pearson had led the Liberals to victory in the 1958 federal election, instead of being road kill as they were in our timeline when the Tories swept the boards. Pearson realized that diplomacy needed a bit of assistance from skullduggery in maintaining Canada’s lead in atomic warfare.

“The Selfish Bastards We Were” by Virginia O’Dine is a post-apocalyptic story after a new ice age set in within a few months. The few survivors struggled on in the Great White North. That’s it.

“True North” by David F. Shultz is about rangers hunting down artificial intelligence drones roaming the tundra. Again, that’s it. A video game vignette.

“The Rankin File” by Chris Patrick Carolan opened in Halifax in 1880. There are steam cars, so that made it alternative history. A police inspector was called in to help catch a terrorist known to be targeting a visiting British Royal Navy ship visiting Halifax. The ship ran on a new kind of power source that never needed replenishing. Many alarums and excursions but the terrorist is stopped in time.

“To Serve And Protect” by Krista Wallace is a science fiction story set in near future Vancouver. The protagonist is part of a squad dealing with suicides, in this case a jumper on the top cable of a suspension bridge. The Suicide Assistance Department is a name that is interpreted literally. You wanna jump, then instead of talking you down they’ll insure you go through with it.

“Looking Back, Looking Ahead” by Maverick Smith is one that only Canadians would understand, a look at Family Day (our February holiday) celebrations after the Justin Trudeau Liberals had maximized their ideology over several decades.

The results were seen from the point of view of a labourer who worked on the gardened terraces of Toronto skyscrapers. She was a serf who struggled to survive in a politically correct country where the middle and upper classes enjoyed life at the expense of front-line workers who did the scutwork for low wages. No yellow vests in sight, as much as they might be needed.

“51-49” by Glen Cadigan is set in modern-day Canada where Newfoundland was still an independent Dominion and a Trudeau was the Canadian Prime Minister. The economics had not changed though. The Newfoundland government was negotiating to join Confederation seven decades later than they did in our timeline. Joey Smallwood was long gone, but his successor had to tread the same minefield in diplomatic negotiations.

“Morning In The Republic Of America” by Fiona Moore is a weird twist of alternative history. The USA went Communist after World War Two, Canada became the Republic of America after it was swamped by refugees from south of the border, and China dominated the world militarily. AH run wild.

“Five Days Of Summer” by Tyler Goodier is a neat twist. Smallpox was a disease of the New World that killed Europeans within five days, and prevented colonization of the Americas. The story looks at the efforts of Micmacs to stop a party of Europeans from landing, not out of territorial imperative but from concern for what would happen to them.

“As Mistress Wishes” by Alexandra Renwick is a post-apocalyptic future set on Vancouver Island. The after-effects of a nuclear war produced inadvertently a cyborg population. The technology survived for metal and ceramic replacement parts when the medical technology did not. The war also resulted in walled cities controlled by matriarchies called The Aunts.



“Northstar” by Dave Steinman is an alternative take on the Avro Arrow supersonic fighter plane, one of the most traumatic incidents in Canadian political history.

In our timeline, on February 20, 1959, Prime Minister John Diefenbaker destroyed the entire Canadian aerospace industry by shutting down the Avro Arrow and other projects. 15,000 people, mostly engineers and technicians, were laid off the next day.

A mass migration of engineers began to the USA where NASA and its contractors were hiring. Canadian technology never recovered.

This story was about the workers refusing to leave the factories. They staged a sit-in until Diefenbaker had to rescind his order. Canada's aerospace industry then continued and within a decade, the Pearson government had put a man on the Moon.

All told, this anthology had a high percentage of good stories, subject to the proviso that non-Canadian readers will probably have to do a bit of Googling as they read through it.

Canadian Speculations.

VISIONS 2020 was an anthology of speculative articles about Canada published in 1970, edited by Stephen Clarkson. It had fifty authors, so I won't review them all one by one. As Clarkson emphasized, the articles were not intended to be serious predictions but rather best guesses based on trends visible in Canada in 1970.

Pause for digression: As I get older, I pay less attention to the superficial noise of public scandals and try to concentrate on discerning the underlying trends. The American President Donald Trump grabs all the headlines now because of his erratic behaviour, while Canada is afflicted by a boy-king whose priorities were legalizing marijuana and babbling about gender politics.

The real trend is the increasing use of a computerized society to track and control people. I'm glad I won't live long enough to see what happens. The modern generation is bringing in the cashless society faster than any government would dare, not thinking about how electronic transfers are easily tracked by tax auditors and banks.

This anthology is a demonstration of the noise effect. The issues that seemed important in Canada in 1970, setting aside the October Crisis, often turned out to be nothing. They are like stories published in 1914 about how the evil Kaiser ruled the world in 2014, or airships dominated the skies and streamlined steam locomotives the ground.

The opening article fusses about multinational corporations. Today we call it globalization, but surprisingly many of those corporations are in retreat. Several

articles worry about separatism, understandable given the times, but now a dead issue in both Québec and Alberta. (Except on slow news days when a reporter has no other copy to file.)

It was amusing to see political correctness, as it then was not known, raising its head, as one of the fifty articles was written in French. I doubt any pure laine francophones read this book, and all the anglophones who did almost certainly skipped over "Quand Un Historien Se Mele De Lire Dans La Boule De Cristal".

Many articles were just straight-line extrapolations of existing technology or politics. Several writers boldly predicted that in the future we would read books only as microfilm and get our newspapers from fax machines. These are excellent examples of the recency effect, where we can only think in terms of the present, not future technology that is beyond our ken.

One prescient article was "Technology And The Polity" by Eric Kierans. At a time when most pundits were learnedly pontificating about the mass media controlling the world with only a few channels of information, Kierans predicted that fifty years hence there would be computerized systems that allowed everyone their own private channels displaying what they wanted, not what the broadcast networks fed them.

He then took the next step and predicted that monitoring and controlling citizens through individualized systems would increase. Today we have Facebook and Google, and tomorrow facial recognition technology and cashless transactions.

Kierans pointed out that the worst outcome would be an efficient bureaucracy "*where mechanical efficiency becomes an absolute rather than a relative virtue*". We are already seeing this where, if we have troubles with our bank or a government agency, finding a real live human to solve the problem is increasingly difficult. The Chinese government is already implementing a social credit system to monitor everything its citizens do.

CONVENTIONAL FICTION: PART 10
by Dale Speirs

[Parts 1 to 9 appeared in OPUNTIA's #70.1A, 270, 285, 313, 364, 385, 398, 414, and 421.]

Book Festivals.

DEATH IN THE OPENING CHAPTER (2011) by Tim Heald is a novel in a series about Sir Simon Bognor, a private investigator who worked for a government agency. He and his wife were in the English seaside village of Mallborne, staying with Sir Branwell Fludd, lord of the manor. The two men were at school together and kept in touch over the decades.

The Flanagan Fludd Literary Festival was nigh, founded by a great-grandfather of the present Fludd of that ilk. One of the organizers was Rev. Sebastian Fludd, cousin to Sir Branwell, who was preparing a sermon as the first chapter opened. As the first chapter closed, he was swinging from a noose.

The police wanted to call it suicide, despite the absence of a note and agreement of all who knew Sebastian that he was not suicidal. Sir Branwell asked Bognor to investigate. Since he was a professional investigator who was somebody in Whitehall, the local police were happy to dump it on him.

Meanwhile the Festival went on. Attendees were arriving even as the body cooled. Opera diva Vicenza Book, nee Dolly the barmaid born and raised in the village, was to open the event with a recital. Martin Allgood, a midlist novelist, was this year's Writer in Residence. He was an average author but good at showboating.

Bognor began investigating and uncovered a variety of soap opera subplots. The widow had cool relations with her husband prior to him suddenly going to heaven sooner than he anticipated. The publican at Fludd Arms was seen arguing vehemently with the deceased.

The narrative took the scenic route, up and down each country road. The novel was low-key humorous, with subtle jokes on every page and a laugh-out-loud one in every chapter.

The pub hosted the opening ceremonies, a funny conflation of pretension and power politics. The writers were there for the oneupmanship game. The

seminars were dull, especially Allgood's talk about dealing with rejection slips. You'd never see any of this at a science fiction convention. Right?

The book fizzled out. Bognor was able to believe that the death was an assisted suicide done without first confirming that Sebastian really wanted to do it. The two suspects believed that time should not be wasted dithering about it. As the Festival wound down, so did the case. Insufficient evidence for court. The humour kept the novel going but the ending was a disappointment.

EVERY TRICK IN THE BOOK (2013) is a novel in a cozy series by Lucy Arlington, pseudonym of Susan Furlong, and/or Jennifer Stanley aka Ellery Adams and Sylvia May. It's complicated. As near as I could figure from Googling, this is a franchise whose authors changed in mid-stream.

The protagonist is Lila Wilkins of Inspiration Valley, North Carolina, who works for the Novel Idea Literary Agency. Every out-of-the-way village should have a literary agency, just as in other cozy series there is a typewriter repair shop in a ski resort or a knitwear store on a remote island in the Great Lakes.

I almost quit reading on page 2 when Wilkins bumbled: *I have cherished each and every day in this career. There's no other job in the world that would give me the chance to discover captivating new voices, unforgettable characters, must-read plot lines, or settings so original and alluring that I long to be transported to the author's fictional realm on the spot.*

And those are just the query letters! I also get to sit at my desk, sipping hot caramel lattes brewed to perfection by Makayla, the talented barista who works downstairs at Espresso Yourself, and delve into a fat pile of manuscripts. Because I represent traditional mysteries and romantic suspense, much of my day is spent reading about intrigues, secrets, and schemes. You'd think that I'd quickly grow tired of those themes, but I haven't.

Show this to any professional editor and, after she stops laughing to catch her breath, she'll tell you a few things about reading slush piles. Note to Wilkins: baristas aren't there because they love the job. It's just that it was the only thing they qualified for with a B.A. in English Literature or Political Science.

I persisted in spite of the rough start, so let us return to the plot summary. The agency was sponsoring a Book and Author Festival in the village. Instead of discovering new talent, Wilkins discovered a body, that of Melissa Plume, an

editor who resembled Wilkins to the point that others commented about how the two were doppelgangers.

As police investigated, the festival went on. Wilkins was the registrant for both participants and members, and had to deal with many delicate egos. There was at least one psychotic writer in attendance. Okay, that's normal for any literary event hosting pitch sessions.

The enjoyment of the festival was marred for Wilkins, who attended seminars and workshops while exercising her peripheral vision to the max in case someone with a knife should approach. The festival attendees had to dodge television cameras and news reporters looking for a hot story. Not an average readercon to say the least. We never have this sort of trouble at When Words Collide.

After the festival concluded, Wilkins began Marpleing, if I may coin a verb. She was side-tracked by worries about her grown son Trey, who was living in a commune whose financial practices seemed suspicious. The second body appeared, that of a local author Tilly Smythe.

Wilkins's sleuthing began to bring out the connections, although several infodumps were required to sort out everything. Plume had been a social worker before becoming an editor, responsible for placing unwanted children in foster homes. Smythe had abandoned her first child decades ago but now had a new life with two children. The killer had grown up the hard way and wanted revenge. It all came together nastily.

Notwithstanding her reputation, the Novel Idea Literary Agency and the villagers didn't hesitate to have Lila Wilkins organize the book-related events for their Taste of the Town food festival. **BOOKS, COOKS, AND CROOKS** (2014) was the next novel in the series. Wilkins was in charge of the culinary writing contest, cookbook publicity and giveaways, and celebrity chef liaison.

Her main worry was keeping all the egos from open warfare. The Best Boor in Show award went to chef Joel Lang posthumously after a gas oven explosion in the demonstration kitchen turned him into pulled pork. Rival chef Klara Patrick was furious that he upstaged the debut of her new cookbook with a stunt like that.

The show must go on, and the festival didn't miss a step as the seminars, book signings, and cooking demonstrations continued. Wilkins' agency was pleased to see a boost in sales of Lang's last book. Nothing like death to bump up the royalties.

Given the clash of giant egos, motive was not an investigating point. The police, with considerable justification, suspect everybody. The NILA management had one concern, how the death would affect books sales of their current stable of celebrity chefs. Who mourned for Lang?

Some of the panels were lively, with chefs discussing each other recipes at the top of their lungs. Audience participation was rife as well, especially when it came to who did what to whom. Patrick drank a hot cup of coffee flavoured with arsenic and became the second victim. Another person had \$100,000 in cash lifted from him. I've been to many book festivals and readercons, and feel safe in saying that at none of them was anyone carrying \$100,000 in cash.

Besides the two murders to worry about, Wilkins had her own family troubles. That didn't stop her from Miss Marpleing and uncovering everyone else's misery. The festival concluded without further casualties. The investigations, hers and the police, didn't. Life carried on at the Agency, an endless hunt through the slush pile for the next big author.

The murderer hadn't left town, as Wilkins discovered when she invited the killer to her house for dinner and a chat. The motive was Patrick stealing credit for recipes. This time, Trey saved his mother from the killer.

BOOK FAIR AND FOUL (2014) by Erika Chase is a novel in a cozy series about Molly Mathews, proprietor of the bookstore A Novel Plot, in the village of Ashton Corners, Alabama. Wanting to boost book sales, she organized the village's first Mystery Book Fair. She was assisted by her friends in the Ashton Corners Mystery Readers and Cheese Straws Society, not only a book club but the worst gang of Miss Marples ever to devastate a country village.

Lizzie Turner, a member of the club, had trouble with one of the festival guests, book publicist Ashley Dixon. They were at college together and did not part as friends. That legacy had festered over the years and erupted into a loud public argument when Dixon reappeared. An argument that made Turner the main suspect when Dixon was murdered.

All the book club began an immediate competition with the police to investigate the murder. For once, the reader can feel sympathetic for the Deppity Dawgs. The local police chief made it clear to one of them: *We're going to have a serious talk about boundaries, as in who is the cop around here.* He should live so long. Their paths constantly criss-crossed as they ferreted out the back stories and jealousies.

Some of the out-of-town guest authors also had issues with Dixon and each other. Traditional enemies seated at panels somehow managed to contain their venom. No brawls erupted but there were more than a few hissy fits. Ah, the cultured life among the literary crowd.

There was only one murderer, but the denouement was a complicated mess of multiple adulteries and as many blackmailers. The reader may wonder why there weren't at least a half-dozen murders, but even for a cozy that would be excessive.

Music Festivals.

Planning big gatherings is difficult enough without tripping over bodies. TREBLE AT THE JAM FEST (2017) by Leslie Budewitz was a novel in a cozy series about Erin Murphy, who managed a general store in Jewel Bay, Montana. She was actively involved in the village's Jazz Festival. When guitarist Gerry Martin fell off a cliff while hiking along the Jewel River, Murphy leaped into the investigation.

Martin had bought property in the neighbourhood, and his private life was gradually illuminated by Murphy. She had other problems to worry about though. Festivals are run on spreadsheets, and as many science fiction convention organizers have learned the hard way, income must meet outgo.

What caused the most grief in running the festival were the people. Some were temperamental artists, some were negligent or sloppy festival staff, and a few had Messiah complexes. The original festival director quit on the eve of the event after quarreling with board members.

For once, the denouement wasn't about old family feuds or romantic entanglements. The murderer needed Martin out of the way in order to clear her complicated finances. The festival went on, and someone else substituted for Martin. In both music and event organization, no one is indispensable.

THEY SHALL MOVE OUT OF THEIR HOLES LIKE WORMS OF THE EARTH: PART 8

by Dale Speirs

[Parts 1 to 7 appeared in OPUNTIA's #307, 308, 331, 347, 390, 399, and 415.]

Way Down Below.

One story that stuck in my mind when I read it as a teenager was "Descending" by Thomas M. Disch (1964 July, FANTASTIC STORIES, and anthologized many times since). The protagonist was an idle man who was a grasshopper living for each day and never a thought for tomorrow.

Unfortunately tomorrow had now arrived. He was broke with no job or likelihood of one, no friends or relatives who would loan him any more money, and a charge card that would soon be over its limit.

He visited the department store for which he had the credit card, and began buying little luxuries. He worked his way up the floors, buying this and that, including some books. On the top floor he had a fine meal in the restaurant, what proved to be his final charge.

Taking the down escalator, he read one of his books as he rode down, automatically moving from one flight of escalators to another without looking up. Much later, he suddenly realized that he had been taking far too many down escalators.

Finally paying attention to his surroundings, he discovered that he had descended far below where any sub-basements would be. There were no ascending escalators anymore, nor any exit doors at the landings.

He tried to run up the escalators, but even an Olympic athlete couldn't keep the pace for long. Resigned to his fate, he continued his descent, hungry and tired. Hundreds of landings went by, and days went by. Was there a twist in the universe that had trapped him, or did the department store have a very strict credit bureau?

He felt himself becoming lighter, near the centre of the Earth, or perhaps indicated that malnutrition and exhaustion would claim him. Then he reached the bottom of the escalators. It was the end in more ways than one.

Underground Detectives.

Sherlock Holmes was multimedia almost from its beginning, first on the stage, then radio and movies. The radio series was long-running, from 1930 to 1955. From 1939 to 1946, Basil Rathbone and Nigel Bruce played the parts they had made famous in the movies. (This and other OTR shows are available as free mp3s from www.otrrlibrary.org.)

“The Out Of Date Murder” was a 1945 episode written by Denis Green and Anthony Boucher. Holmes and Watson were on vacation in the summer of 1900 in the South Downs. A friend, Prof. Whitmore, told them of nearby limestone caves with mummified animals in them, preserved by the lime for centuries.

No sooner was this infodump concluded than they were summoned by Lady Clavering to her estate where the caves were located. Her husband Sir George had disappeared five years before. She wanted him declared legally dead so that she could remarry. Holmes advised her that was a lawyer’s job but she wanted him to investigate any traces.

At the estate, Holmes and Watson were strolling about looking at the lime pits and other scenery. They met Daft Timmy, the village idiot, and Sir George’s brother Harry. The latter will inherit the title after Sir George is declared dead, and will marry the widow.

Down into the caves Holmes and Watson went, accompanied by a guide. A wall collapsed and opened into a new cave wherein was found the body of a murdered man. It had been dressed to look like someone from the 1700s, but Holmes spotted some anachronisms and quickly determined it was Sir George.

The guide went off to fetch the police while Holmes and Watson stood guard. In the interval, the murderer returned to collapse the cave exit and trap the two men underground. They managed to find an exit, more a rabbit hole than anything else, and after calling for help from the bottom of the shaft were rescued by Daft Timmy.

Back at the manor house, Holmes identified the culprit, none other than Prof. Whitmore, who was madly in love with Lady Clavering and wanted Sir George out of the way. He was rather put out when she decided to wed Harry. He’ll hang for it.

In the epilogue, Holmes decided that the South Downs would make an excellent retirement home, and bought a plot of land for the day he retired. A nice touch of foreboding.

LET GEORGE DO IT was an old-time radio series that ran from 1946 to 1954. George Valentine was a private detective who ran a classified ad in the newspapers which was quoted by him in the opening of the show: *Personal notice: Danger’s my stock in trade. If the job’s too tough for you to handle, you’ve got a job for me. Write full details.*

The episode would usually open with the voice of someone writing the letter out loud, appealing for help. Sometimes Valentine would do the opening narration. The cases were not necessarily criminal investigations. The client might need him to courier a package or do some other strange, seemingly innocuous task. His secretary/girlfriend was Claire Brooks, whom everyone called Brooksie. She often accompanied him out into the field on a case.

“The Tunnel Project” was a 1948 episode written by David Victor and Herbert Little Jr. The letter writer was William Kane, president of a construction company putting a tunnel underneath a river. They had been troubled by several cave-ins and accidents, which Kane thought was sabotage. His partner was Jim Bower, and they had been in the business of tunneling for years.

Valentine took the case, assisted by Brooks. Kane told them he suspected Bower, who he thought was trying to get ahead in the worst way. The duo posed as reporters doing a feature on the project.

This allowed for some admittedly essential infodumps on how tunneling through soft sediments under a river was accomplished. To keep the water above from seeping in until the casing was installed, the active face of the tunnel was pressurized.

The pressure differential was high enough that an airlock was needed so those going back and forth would not get the bends from the gases bubbling out of their blood. They had to wait a half hour in the airlock while the air pressure was slowly adjusted. If the transition was made too fast, the sandhogs, as the tunnel workers were known, would first exhibit signs much like inebriation before eventually dying from brain lesions.

The foreman that took them into the tunnel gave them metal tags that acted as Medic Alert bracelets. If a sandhog was found staggering around up top, the tag told the police to rush him back to the airlock instead of just pushing him into the drunk tank. Note that well.

Valentine, Kane, and Bower had it out in a big argument. Kane was not entirely without sin. Valentine did his research, and with some information withheld from the listener took the plot in a different direction. There was a trawler that came out onto the river every night for no apparent reason and hovered just ahead of where the tunnel face was.

While checking the tunnel again, someone got Valentine the hard way and then brought him up to the surface without his tag. Brooks managed to find him before he died from the bends. That crisis taken care of, attention shifted to the trawler.

The trawler was owned by treasure hunters looking for a Spanish galleon that had sunk in the river directly in line with the tunnel excavation. They infiltrated the tunnel company as sandhogs. They sabotaged operations to slow down the excavation so they could retrieve the gold from the ship before the tunnel reached it.

The rest of the story was just a matter of tying up loose ends. An interesting plot that successfully misled the listener, albeit by withholding information.

Underground Lairs.

“The Living Dead” was a 1967 episode of THE AVENGERS, written by Brian Clemens. The original Avengers, the suave British spy series with John Steed and Emma Peel, not the hyperactive American superheroes prancing about in brightly coloured spandex. The episode was set in an English mining village. Its principal mine, owned by the Duke of Benedict, was closed after a disaster which interred the Duke and a group of mining engineers deep underground.

The village drunk claimed to have seen the Duke’s ghost, which got out of his tomb, went into the village chapel, and rang the church bells. That brought two rival groups to the village, SMOG (Scientific Measurement Of Ghosts) and FOG (Friends Of Ghosts). It also brought Steed and Peel, after another MI5 agent discovered suspicious goings-on, and not the ghosts, and was murdered.

After a few alarms and excursions, Steen and Peel discover a secret underground city deep below the mine. Quite impressive, being in a gigantic cavern that held a city illuminated by overhead lights, with 5-story office buildings, shops, and, as the mastermind bragged to them, even a cinema. For once, a well thought out lair.

When Peel questioned how it could have been built without anyone topside noticing, it was explained there was a tunnel to the coast a short distance away, big enough to take submarines. The city was designed to accommodate 20,000 soldiers within a few years, when The Revolution would begin. It was a Soviet plot, it being the Cold War.

Since we know England was never swarmed by Communists, the plot obviously failed. Nor was there the usual catastrophe that destroyed the lair, as per any James Bond movie you ever saw. Steed and Peel escaped in the ordinary way of things, and presumably reported to their controller, who arranged to have some of the lads smoke the place out.

Underground Ecosystems.

“Beneath A Red Sun” by James C. Glass (2019 Mar/Apr, ANALOG) is a concept story about explorers landing on a planet orbiting a red dwarf. The star emitted massive flares regularly, yet there was something emitting oxygen gas from caves, so life must be present somewhere.

Strange crystalline objects dotted the landscape. When a big flare hit the planet, the explorers saw the objects open up like flowers. The petals converted the raw energy into light and beamed it down light pipes to a subterranean world filled with marvels. The underground ecosystem was able to exist on the light piped down from above.

Not too farfetched, as Earth has subterranean plants with window leaves at the surface to send light down into the plant for photosynthesis. In South Africa, for example, there are many genera of such plants, examples being *Lithops*, *Conophytum*, and some species of *Haworthia*.

SEEN IN THE LITERATURE

Pietrzyński, G., et al (2019) **A distance to the Large Magellanic Cloud that is precise to one per cent.** NATURE 567:200-203

Authors’ abstract: *In the era of precision cosmology, it is essential to determine the Hubble constant empirically with an accuracy of one per cent or better. At present, the uncertainty on this constant is dominated by the uncertainty in the calibration of the Cepheid period-luminosity relationship (also known as the Leavitt law).*

The Large Magellanic Cloud has traditionally served as the best galaxy with which to calibrate Cepheid period-luminosity relations, and as a result has become the best anchor point for the cosmic distance scale. Eclipsing binary systems composed of late-type stars offer the most precise and accurate way to measure the distance to the Large Magellanic Cloud.

Currently the limit of the precision attainable with this technique is about two per cent, and is set by the precision of the existing calibrations of the surface brightness-colour relation. Here we report a calibration of the surface brightness-colour relation with a precision of 0.8 per cent.

We use this calibration to determine a geometrical distance to the Large Magellanic Cloud that is precise to 1 per cent based on 20 eclipsing binary systems. The final distance is 49.59 ± 0.09 (statistical) ± 0.54 (systematic) kiloparsecs.

Ponti, G., et al (2019) **An X-ray chimney extending hundreds of parsecs above and below the Galactic Centre.** NATURE 567:347-350

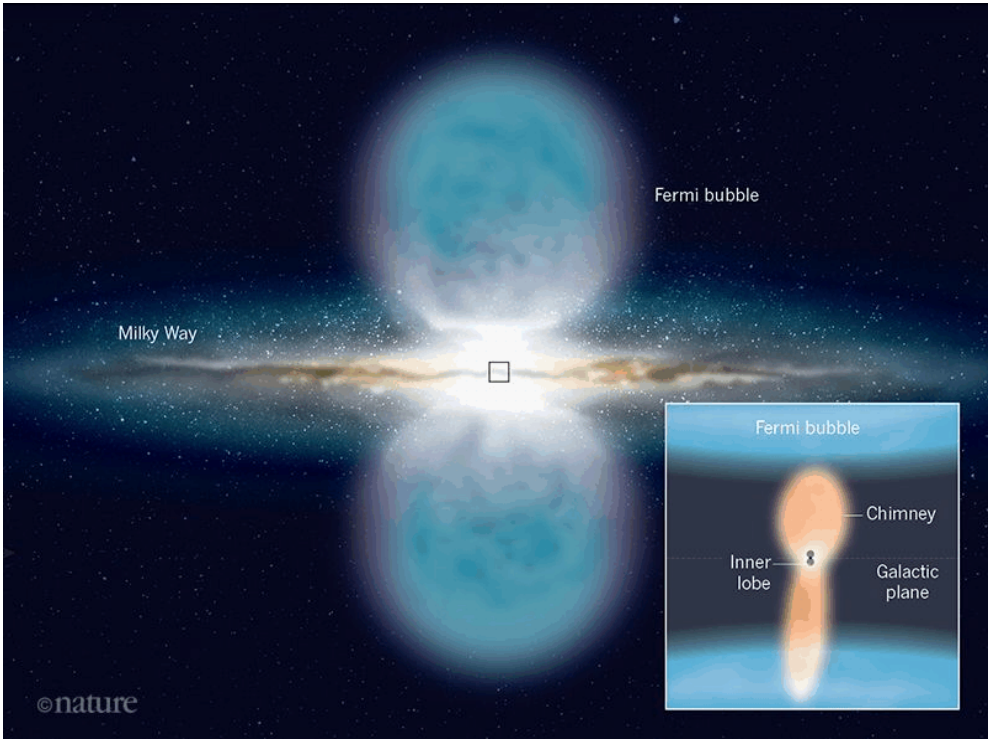
Authors’ abstract: *Evidence has mounted in recent decades that outflows of matter and energy from the central few parsecs of our Galaxy have shaped the observed structure of the Milky Way on a variety of larger scales. On scales of 15 parsecs, the Galactic Centre has bipolar lobes that can be seen in both the X-ray and radio parts of the spectrum, indicating broadly collimated outflows from the centre, directed perpendicular to the Galactic plane.*

On larger scales, approaching the size of the Galaxy itself, gamma-ray observations have revealed the so-called ‘Fermi bubble’ features, implying that

our Galactic Centre has had a period of active energy release leading to the production of relativistic particles that now populate huge cavities on both sides of the Galactic plane. The X-ray maps from the ROSAT all-sky survey show that the edges of these cavities close to the Galactic plane are bright in X-rays.

At intermediate scales (about 150 parsecs), radio astronomers have observed the Galactic Centre lobe, an apparent bubble of emission seen only at positive Galactic latitudes, but again indicative of energy injection from near the Galactic Centre.

Here we report prominent X-ray structures on these intermediate scales (hundreds of parsecs) above and below the plane, which appear to connect the Galactic Centre region to the Fermi bubbles. We propose that these structures, which we term the Galactic Centre ‘chimneys’, constitute exhaust channels through which energy and mass, injected by a quasi-continuous train of episodic events at the Galactic Centre, are transported from the central few parsecs to the base of the Fermi bubbles.



Avdellidou, C., and J. Vaubaillon (2019) **Temperatures of lunar impact flashes: mass and size distribution of small impactors hitting the Moon.** MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY 484:5212-5222,

Authors' abstract: *Lunar impact flashes have been monitored over the last 20 years for determining the mass frequency distribution of near-Earth objects in the cm-dm size range. In this work, using telescopic observations in R and I bands from the NELIOTA data base, impact flash temperatures are derived. They are found to range between approximately 1300 and 5800 K.*

In addition, it is also found that temperature values appear to have a distribution significantly broader than a Gaussian function, therefore making it difficult to estimate the impact flash luminous energy by assigning an average temperature. By measuring the flash temperatures and assuming a black body emission, here we derive the energy of the impacts.

We also study the potential link of each event to individual meteoroid streams, which allows us to assign an impact velocity and therefore constrain the projectile mass. Impactor masses are found to range between a few to hundreds of grams, while their sizes are just of few centimetres following a size frequency distribution similar to other studies.

Depner, C.M., et al (2019) **Ad libitum weekend recovery sleep fails to prevent metabolic dysregulation during a repeating pattern of insufficient sleep and weekend recovery sleep.** CURRENT BIOLOGY 29:957-967

Authors' abstract: *People commonly increase sleep duration on the weekend to recover from sleep loss incurred during the workweek. Whether ad libitum weekend recovery sleep prevents metabolic dysregulation caused by recurrent insufficient sleep is unknown.*

Here, we assessed sleep, circadian timing, energy intake, weight gain, and insulin sensitivity during sustained insufficient sleep (9 nights) and during recurrent insufficient sleep following ad libitum weekend recovery sleep.

Healthy, young adults were randomly assigned to one of three groups: (1) control (CON; 9-h sleep opportunities, 8), (2) sleep restriction without weekend recovery sleep (SR; 5-h sleep opportunities, n = 14), and (3) sleep restriction

with weekend recovery sleep (WR; insufficient sleep for 5-day workweek, then 2 days of weekend recovery, then 2 nights of insufficient sleep, n = 14).

For SR and WR groups, insufficient sleep increased after-dinner energy intake and body weight versus baseline. During ad libitum weekend recovery sleep, participants cumulatively slept ~1.1 h more than baseline, and after-dinner energy intake decreased versus insufficient sleep. However, during recurrent insufficient sleep following the weekend, the circadian phase was delayed, and after-dinner energy intake and body weight increased versus baseline.

In SR, whole-body insulin sensitivity decreased ~13% during insufficient sleep versus baseline, and in WR, whole-body, hepatic, and muscle insulin sensitivity decreased ~9%–27% during recurrent insufficient sleep versus baseline.

Furthermore, during the weekend, total sleep duration was lower in women versus men, and energy intake decreased to baseline levels in women but not in men. Our findings suggest that weekend recovery sleep is not an effective strategy to prevent metabolic dysregulation associated with recurrent insufficient sleep.

Waights, S. (2019) **The preservation of historic districts: Is it worth it?** JOURNAL OF ECONOMIC GEOGRAPHY 19:433-464

Author's abstract: *I investigate the welfare effect of conservation areas that preserve historic districts by regulating development. Such regulation may improve the quality of life but does so by reducing housing productivity, that is, the efficiency with which inputs (land and non-land) are converted into housing services.*

Using a unique panel dataset for English cities and an instrumental variable approach, I find that conservation areas lead to higher house prices for given land values and building costs (lower housing productivity) and higher house prices for given wages (higher quality of life). The overall welfare impact is found to be negative.

Speirs: *This is the gentrification effect. Upgrading a neighbourhood costs money that only well-to-do people can afford. The working poor are shoved into some other non-trendy neighbourhood.*

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

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Sleeping Earth
While Winter rules,
Longer daylight
Gently nudges,
Living things
Big and small,
Colour arises
Bringing hope and joy,
The earth warms
Here in the North,
Day and night
Match their time,
Everywhere one looks
Life is resplendent.

"Seasonal
Greetings!"

Gulf Islet in Bloom #2

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To:

Date -

Seasons end, Seasons begin!

