OPUNTIA 462

Early December 2019

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.

THE CPR HOLIDAY TRAIN 2019

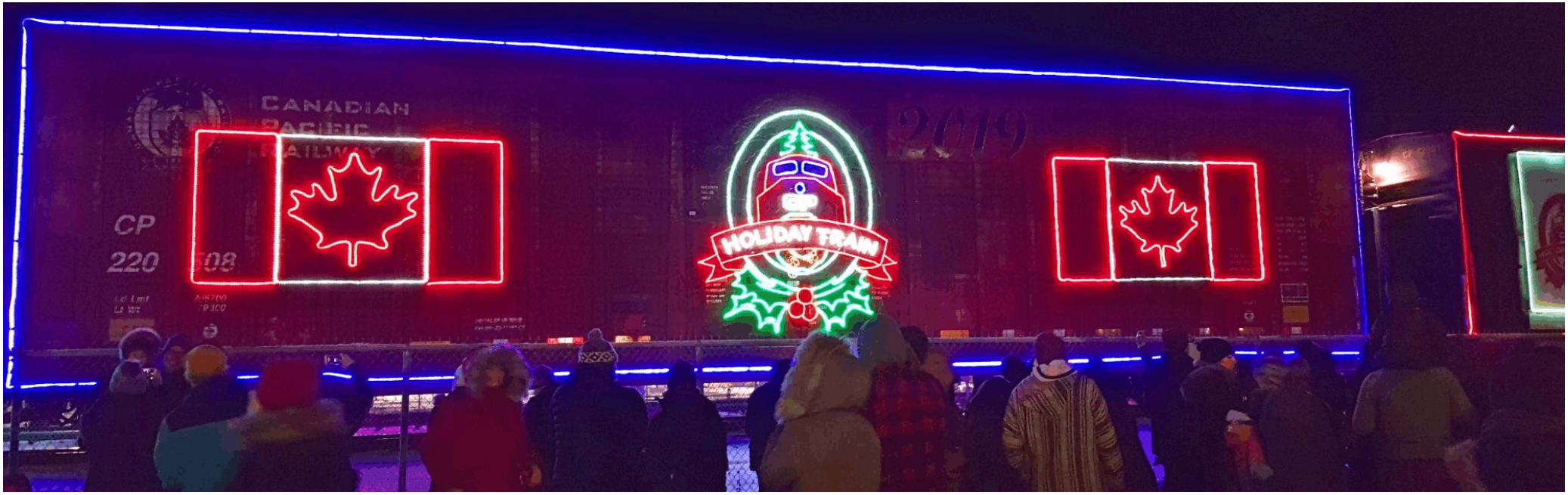
photos by Dale Speirs

Each year the Canadian Pacific Railway sends a train on tour across Canada, the sides of which are decorated with animated lights. It made a stop in Calgary on December 8, and parked for the night on a siding at the Anderson LRT station.

The temperature was relatively mild at -10ºC. Sunset this time of year was 17h00, so the displays stood out brightly.

At left: On one of the boxcars, the side folded down to make a stage. The fog coming off the stage was not special effects. It was condensation from industrial-strength heaters to keep the musicians warm.

The singer, who had to perform out on the stage in the open, had to dress much warmer.



An animated hockey sequence of "She slides, she shoots, she scores!"

This sequence stretched across two boxcars. A snowman made a ski jump and almost fell apart on landing on the next boxcar. Nonetheless he was given a perfect score by the three reindeer judges.

TRANSIT FANNING IN CALGARY: PART 27
by Dale Speirs

[Parts 1 to 26 appeared in OPUNTIAs #256, 258, 260, 264, 269, 275, 283, 298, 302, 327, 333, 341, 348, 357, 359, 365, 369, 371, 392, 394, 396, 407, 412, 426, 435, and 445.]

On The Buses.

I ride the buses quite often since I retired, and always when I go downtown where parking costs an arm and a tire. Calgary Transit has a good system. Occasionally a drunk creates problems on the LRT train, but the bus drivers are good at screening out the troublemakers.

Heard on the bus as I was heading home, from a teenaged girl sitting directly behind me. She was talking on a cellphone to a friend and said: *I'm starting to feel a little nauseous.* I hoped she would be getting off within a few stops but she was still there at my stop. Fortunately she held it in.

Fiction.

FIBBER MCGEE AND MOLLY was an old-time radio comedy that ran from 1935 to 1953 as a half-hour show before a live audience. Fibber McGee and his wife Molly lived in Wistful Vista, state never specified, and did not seem to have gainful employment yet always had money to be doing things.

The announcer of the show was Harlow Wilcox, who had bit parts within each episode but whose main duty was to barge into the plot at intervals and extol the merits of the sponsor's products. The normal format was a parade of regular characters, each of whom would do a bit routine then make way for the next.

"Stock In Transit Company" was a 1952 episode written by Phil Leslie and Keith Fowler. It began with Fibber arriving home and excitedly telling Molly that he had just paid $100 for a share of the Wistful Vista Transit Company, which had the streetcar concession for the town.

Fibber was a pompous and vain man who always thought he was the smartest man in the room. Now being a shareholder, he decided that made him an expert on how to run a streetcar system, so off he went to the company headquarters to give them the benefit of his vast experience. En route he got into an argument with a streetcar conductor who insisted he and Molly pay their fares.

This was an affront to Fibber's dignity as a shareholder, but he coughed up two dimes and resolved to have the conductor fired when he got to the offices. On arrival, he bluffed the corporation executives into thinking he was a major holder of stock, not telling them he only had one share.

After raising chaos around the offices and car barn, the president of the company arrived. On learning that Fibber only had one share, he bought him out for $200 just to be rid of him quickly. Alas, the plan backfired. Fibber went back to the bank and bought two more shares of the transit company.

On a slightly more serious note but not unleavened with humour was the novel THE GRENDEL AFFAIR (2013) by Lisa Shearin. It was the first novel in a series about Makenna Fraser, an agent for Supernatural Protection and Investigations. Her talent was seeing through any disguise, shield, or paranormal spell. The North Carolina village where she was born and raised had no action for a private detective (no Miss Marple in residence to spike the murder rate) so Fraser moved to New York City for steady work.

Her current job was tracking a killer down in the subway tunnels. It was a direct descendent of Grendel, the one that gave Beowulf all that trouble. Like its ancestors, it did not like drinking parties and loud noisy celebrations. This worried the SPI considerably because New Year's Eve was in two days.

If the monster was not dealt with by then, Times Square would become a bloodbath. Fraser and her partner Ian Byrne had to take it out. Travel on the NYC subway system is, I'm told, much the same as those post-apocalyptic fantasies. Fraser and Byrne traversed the tunnels where the grendel was tearing off arms and heads from riders.

In case the reader hadn't read BEOWULF, an infodump filled in the whys and hows. It seemed the grendels were cave dwellers in Scandinavia almost hunted to extinction. Somehow some managed to migrate to America and found an ideal new habitat.

With four seconds to go before the ball dropped in Times Square, Fraser dropped a ball of her own. Fortunately she had backup to help her. The denizens of NYC were able to celebrate New Year's Eve without being shredded into bloody pulp.

Pipelines are a sensitive topic in Alberta, which is landlocked and needs them to reach foreign markets. I'd go into the politics but that would only get my blood pressure too high.

MAX routes are limited-stop crosstown expresses.

MAX routes have colours instead of route numbers.

Anderson Road LRT Station.

The Calgary LRT system opened for business in 1981 and has since been extended to 44 stations along four routes, all of which overlap in the downtown core. The south leg, of which Anderson Road was a station, was part of the original system. The stations were built in what architects refer to as Brutal Concrete style. When the Anderson station was rebuilt recently, I had hoped for something better, but all that was done was to replace one set of concrete steps with another.


2018-04-10


2009-04-07

2018-04-28

2018-04-09

Above: Meet the new station, same as the old station. Now, instead of a covered concrete stairway, we have an exposed outdoor concrete stairway. Our tax dollars in action.

2019-04-20

Just to put all that into context, here is a view of the CPR Holiday Train parked on the siding at Anderson station, as seen from the top of the overpass ramp. I got there early about 18h00. By the time I left the crowd had filled the parking lot.

The train had duplicate sets of lights on both sides of the display but since the tracks at middle and right were in use by LRT trains, the audience had to be kept on the parking lot side to the left of the photo.

CRY UNCLE AND LET SLIP THE DOGS OF WAR: PART 5

by Dale Speirs

[Parts 1 to 4 appeared in OPUNTIAs #361 to 364.]

The Girl.

THE MAN FROM U.N.C.L.E. television series was a take-off from the James Bond movies. The spy fad only lasted a few years. In the dying throes of TMFU, it spawned a short-lived spin-off called THE GIRL FROM U.N.C.L.E., which only lasted the 1966/67 season.

The protagonists were April Dancer and Mark Slate, played by Stefanie Powers and Noel Harrison. They were good actors but couldn't overcome shoddy scripts, cheap SFX, and recycled sets and locations. April Dancer was constantly being stripped of her clothing to maintain the interest of male viewers.

Ian Fleming supplied the name April Dancer as an unused character from his novels. In the television series, she had a strong presence because Powers played her forcefully. Powers kept changing her accent, sometimes within an episode even if not called for in the plot. Perhaps as an inside joke she often imitated Harrison's English accent (he was the son of actor Rex).

I bought the DVD set of TGFU, but it was not a good purchase. Not only did I do a lot of fast-forwarding, often I jumped chapters at a time. Like TMFU, each episode of this series was formally divided into four acts. It was a defense mechanism of the producers, partly to allow bumpers that would wash out the bad taste from the commercials, and also to prevent syndicators from clipping dialogue in reruns to allow a few more minutes of commercials.

The problem with this format was that Acts 1, 2, and 3 had to end on cliffhangers to ensure the audience would come back after the commercial. Invariably this was Dancer and/or Slate being captured or about to die an elaborate death by the villain's superscience machine. The viewers knew that Dancer and Slate were booked for the series, so there was never any suspense.

The end credits of every episode always closed with a little joke from the producers: *We wish to thank the United Network Command for Law and Enforcement without whose assistance the program would not be possible.*

The Effects.

The budget money seemed to have been spent mostly on guest actors, big names who were on the way down and could be had cheaper than in their glory days, yet still be recognizable to the viewing public. Sets were reused so often that an attentive viewer will readily recognize them not only from previous episodes but other television series. Stock shots were recycled constantly.

Picking an example, the 1967 January episode "The Drublegratz Affair", written by Boris Sobelman, was about a principality of that name being taken over by THRUSH, the archenemy of UNCLE. The bad guys were killing off the true heirs to the throne so that their candidate could take up the sceptre and make Drublegratz a haven for the bad guys.

The opening of the episode had a screen title "Somewhere In Mittel Europa". A moment later, a customs post was shown at the border. Clearly visible in the background was the Golden Gate bridge of San Francisco. The prince drove up to the post in a shiny new 1966 Plymouth sedan and was passed by the border guards to go out on the bridge.

THRUSH then hauled out its superscience bridge destroyer, which used a sub-woofer loudspeaker on top of a van to shake the bridge to pieces and send the prince plummeting to his death. The van, by the way, also showed up frequently on both series, used by both sides and occasionally repainted.

The SFX consisted of the film clip of Galloping Gertie, the infamous Tacoma Narrows bridge in Washington State that was shaken apart by winds on November 7, 1940.

A car shown on the bridge, purporting to be the prince's car, was a late-1930s coupe from the real-life film clip, certainly nothing like the 1966 sedan seen a moment earlier. Notwithstanding all that, THRUSH did kill the prince this way.

There was still one more heir to be disposed of to clear the line for the evil princess, who was a THRUSH agent. The resident mad scientist, pausing only to explain low-frequency resonance to his fellow THRUSHers, intended to destroy the heir by bringing down a glacier on top of him with the resonance woofers.

The viewer will anticipate stock footage of an avalanche, not colour matched to the rest of the episode, followed by a close-up of soap flakes and styrofoam blocks falling on the characters. The viewer will be correct.

In both UNCLE series, the agents used a transmitter concealed inside a pen to communicate with headquarters. Dancer used a powderpuff compact. UNCLE agents often held conversations in a restaurant or sitting next to fellow passengers on airplanes. Somehow no one overheard the chatter or noticed an agent talking to his pen or her compact. Incoming calls were signaled by loud beeping. Hardly inconspicuous to have a beeping pen.

Recycled Scenery.

I spent 31 years as a professional horticulturist in parks maintenance. Like any good gardener, when I entered a park I always glanced around at the trees and shrubs for any diseased or broken branches. It became an unbreakable habit and I still do it even though I retired in 2010.

That habit made it difficult for me when watching television shows or movies that used stage sets mixing tropical plants from different continents. In the case of the back roads of the MGM studio lots, I knew certain trees by heart because of their distinctive branches.

Every tree branches differently, as unique as a fingerprint. In several episodes of TGFU, car chases repeatedly took place on the same roads. I don't mean just from one episode to the next. I mean within the same car chase scene.

As an example, "The U.F.O. Affair" (1967 January), written by Warren Duff, depicted the vehicles of the car chase driving back and forth past the same birch tree with a V-angled secondary trunk. I also noted a large shrub, with a branch sagging in a distinctive way, which managed to stay ahead of the cars.

Slate drove with Dancer hanging on for dear life in the passenger seat (no seatbelts in those days), the bad guys after him, and the 5-minute chase scenery indicated that they were going round and round in circles. Often they would pass back and forth between back lot irrigated greenery and the desert hills.

[This is off the topic, but the BATMAN television series constantly showed the Batmobile roaring through desert hills as the heroes drove into Gotham City, which was the alter ego of New York City.]

That same episode had THRUSH launching their flying saucer. They were supposedly in the North African desert, but the scenery flashing below were the lush green fields of Europe. The sky was clear blue except when the saucer was seen in a long shot, when the dangling hubcap it obviously was cast its shadow onto the painted studio backdrop of clouds.

In that same episode, one of the THRUSH commanders watched the UNCLE car via a remote screen. The only way he could have seen those views of the car passing down the road would have been to set up a camera crew every hundred metres. Even in today's world of drones with Web cameras, there was no way he could have seen such views.

The car chase included a helicopter pursuit, stock footage of it buzzing over the trees, which I recognized from its use several times in TMFU. The UNCLE car was equipped with anti-aircraft missiles, one of which was fired and successfully blew up a model of a different chopper that had been soaked with gasoline, judging from the tremendous fireball. Hold that thought for a moment.

"The Furnace Flats Affair" (1967 February), written by Archie L. Tegland, was about THRUSH's attempt to take over a ghost town and the surrounding desert. The land held the only deposit of a rare glassy mineral that could be used for a death ray. The ghost town was the MGM back lot but most of the action took place on a sound stage with a painted backdrop.

Jeeps were driven back and forth, and horses galloped in front of the large murals. The astute viewer will soon recognize a particular clump of three hills in the far distance which appeared over and over, although the boulders and shrubs in the foreground were shifted about in different scenes.

The plot began with the death of the landowner while shooting it out with THRUSH agents, not by gunshot but from a heart attack. His will specified that any young woman who would ride in a race across the desert would get the estate. April Dancer was one, and a very chesty female THRUSH agent was another. The third woman was eventually revealed to be the landowner's missing daughter.

There were all sorts of nasty tricks in the race. One of them was the THRUSH agent firing a revolver at a helicopter coming in for a landing. It blew up in a huge fireball, and yes, it was that same stock shot.

Dancer never finished the race, but the daughter did. Presumably she would be on UNCLE's side. Chesty approached the finish line ribbon but the expected scene of her breaking the ribbon with her bosom did not occur. Probably cut by the network censors.

Realism.

But not to criticize the UNCLE series completely. They did get a few points right. One aspect of movies and television shows that always irritated me was the lack of attention to economics.

Supervillains, for example, built their headquarters inside volcanoes or in remote eries. You don't have to be a contractor to know the ridiculous expense and complications of such lairs, as opposed to renting a warehouse in an industrial district that no one would pay attention to.

The UNCLE series, on the other hand, paid attention to such things. Their New York headquarters was hidden behind a tailor shop. The agents had to fly to Europe in economy class. Both series had running gags about expense accounts getting out of hand.

Take the TGFU episode "The Double-O-Nothing Affair" (1967 March), written by Dean Hargrove, as an example. UNCLE was trying to track down a THRUSH communications satrap, which turned out to be underneath a used car lot. The MacGuffin was a device which had triangulated the location but had gone astray. Both THRUSH and UNCLE were chasing it.

Mark Slate had injured his leg in the opening chapter, so his controller Alexander Waverly assigned him to desk duty, mainly to avoid aggravating the injury. Waverly commented to April Dancer that medical expenses were running high in the fiscal quarter and he needed to keep them down to stay within budget.

The THRUSH commander, meanwhile, was worrying about their appropriations committee. That organization was run as a multinational corporation, and satrap commanders had to report statistics such as dollars cost per kill. The local THRUSH satrap was under review by an auditor, who struck more fear into their hearts than any UNCLE agent ever could.

FOOD COZIES: PART 17

by Dale Speirs

[Parts 1 to 16 appeared in OPUNTIAs #432 to 434, 436, 438, 441, 442, 444, 447, 450, 454, 456 to 458, 460, and 461.]

Food cozies are Miss Marple style novels, very popular. Most are worth reading once if you like mysteries, although it is doubtful any of them will stand the test of time. Recipes are generally included, if not at the back of the book, then in between chapters or sometimes integrated into the text. Don't read these books if you have an appetite. I have learned from experience to read these novels on a full stomach.

Sit-Down Restaurants.

So you have a dream of opening your own restaurant and dazzling a packed house every night with your tasty menu. Whatever you do, don't settle in a rural village, especially if you are a middle-aged woman fleeing the big city and coming back to your roots. You will become a murder magnet. It is written.

KILLER IN THE KITCHEN (2015) by Donald Bain was a novel based on the television series MURDER SHE WROTE. The chief protagonist was Jessica Fletcher, the American successor to Miss Marple. Fletcher was a freelance writer who had decimated the population of Cabot Cove, Maine. Since there was a shortage of victims, it was explicitly stated in this novel that Cabot Cove was prospering as a summer resort. This brought in a fresh crop of murder victims to maintain the fatality rate.

This novel began with the opening of the Fin & Claw restaurant, owned by Bradley and Marcia Fowler. They, and Brad's mother, put every penny they had into it, so they weren't happy when competition set up next door. Gerard Leboeuf was a Noo Yawker who had a summer house in Cabot Cove and big splashy restaurants in several cities. He decided the village needed another one, the French Bistro, which would out-compete the Fowlers.

Leboeuf was a boor and a bully, which naturally marked him for death. He had quarreled with Bradley just before the murder, so that supplied the main suspect. The death was a boon to the French Bistro, which had a lineup of curiosity seekers out the door, while the Fin & Claw parking lot was almost empty.

The case was a messy one. Leboeuf's wife Eva and grown son Wylie had both lived their lives about one indictment away from 25 years to life. His staff, the ones who stayed in the kitchen more than a few months, were no better. The Fowler marriage was shaky, and Marcie hated the restaurant business.

It all ended up in a tangle that was sorted out when Eva confessed. Had she remained silent, she would have gotten off due to Fletcher contaminating the evidence. There were a couple of deus ex machina twists to make the good guys happy and to send some of the bad guys off with a red card. Then Fletcher and the survivors sat down to a delicious meal at the Fin & Claw.

OUT OF THE DYING PAN (2016) by Linda Reilly was a novel in a cozy series about Talia Marby, proprietor of Fry Me A Sliver in Wrensdale, Massachusetts. She was expanding her shop beyond fish and chips to other deep-fried foods and making it into a sit-down restaurant.

Her immediate problem was interference from Ria (no last name given), a nasty woman who operated a boutique nearby. Events got nastier when someone strangled Ria using Marby's scarf.

The Marpleing had to yield frequently to her restaurant. Tables had to be wiped clean, and employee disputes sorted out. She was under pressure to set up a delivery service but couldn't do it for lack of employees. Apparently the village didn't have Skip The Dishes or Uber Eats.

Ria, as mentioned before, was nasty but her mistake was going against a nastier piece of work, a man whom she saw commit a murder years ago. Marby found that out herself during the traditional confrontation where the Miss Marple barely survived.

Two recipes in the appendix, one for Deep Fried Meatballs and the other for Deep Fried Marble Cake. There lay the real mystery of the book, namely why anyone would deep fry cake. Not as bad as the infamous Deep Fried Butter at the Iowa State Fair but even so ...

A DEADLY FEAST (2019) by Lucy Burdette (pseudonym of Roberta Isleib) was a novel in a cozy series set in Key West, Florida, where the protagonist Hayley Snow worked as a food critic for a local glossy magazine.

She found herself helping a friend Analise Smith, who operated a seafood tasting tour. On the last day for Smith's current tour group, one of the tourists died after sampling food. It could have been heart trouble but the police had nagging doubts.

Snow had a big family dinner planned and was to be married a few days after that. Just as a race horse always answers the bell, so it was that her other obligations did not impede Snow from Marpleing. She uncovered the typical melodramas of the restaurant business, especially on an island where the high menu prices have customers demanding the quality to go with them.

The murderer was cleaning the kitchen, to speak figuratively, for a drug smuggling operation that used a restaurant as the connection. The wedding was a success and the survivors enjoyed the food.

The recipes appendix began with Key Lime Pie. A variety of dishes followed, although the reader may wonder why anyone would invent Lobster Macaroni And Cheese. Finishing up was the dish served at Snow's wedding reception, Strawberry And Lime Sponge Cake.

SILENCE OF THE JAMS (2017) by Gayle Leeson (pseudonym of Gayle Trent) was a novel in a cozy series about Amy Flowers, proprietor of the Down South Café in Winter Garden, Virginia.

She had been annoyed by constant harassment from George Lincoln, a developer who wanted to buy her café as a teardown. While eating there and publicly arguing with her, he collapsed and died of poisoning. His death was an affront to Flowers, so she did some Marpleing.

Notwithstanding that, she still seemed to have good trade in the café. The Fourth of July was a few days later. There were a steady stream of customers buying ready-to-go picnic food for the celebrations. Flowers was also courting or being courted by several men. A busy woman indeed.

The back stories she uncovered were local politics, people with financial problems, medical malpractice, and assorted soap operas. She had a spot of trouble with the Deppity Dawgs but smoothed that over by bringing them some good eats from the café. A refreshing change from their regular diet of doughnuts.

The murderer had being trying to cover up his past, which Lincoln had been trying to use for blackmail. The denouement ended the usual way and all was well. The recipes appendix started well with Fudgy Chocolate Cake, although it stumbled with the Peanut Butter Pie. For savouries, there was the Beef And Cheese Pasta Bake.

FRENCH FRIED (2017) by Kylie Logan (pseudonym of Connie Laux) was a novel in a cozy series set in Hubbard, Ohio, where Laurel Inwood helped her aunt Sophie Charnowski operate the Terminal At The Tracks, a restaurant specializing in ethnic foods.

The ethnic part varied from week to week. As the novel began, the Statue of Liberty was in the news, so the restaurant was featuring French food all week. For expertise in genuine French cuisine, Charnowski brought in an old friend Raquel Arnaud to help with the menu.

Arnaud was not much of a diplomat and obviously had hidden back stories she was carrying around as baggage. Not for long though, as Inwood and a friend found her dead from poisoned wine. The Deppity Dawg was rather casual about methodology. Upon arrival at the crime scene, he asked Inwood to go into the kitchen and make him some coffee. He'd been working a long shift and needed something to pep himself up. Given how casual the police investigation was, for once the Marpleing could be justified.

Inwood hardly got a look-in to the restaurant. When she did, an arsonist set it on fire. Fortunately the damage was confined to the lobby. Unfortunately it indicated Arnaud's murderer was nervous and trying to erase all connections. The restaurant soon re-opened and once again began peddling quiche, tartine, and creme brulee to the villagers.

The murderer was caught in due time. He had been afraid the Arnaud would expose his past from decades ago, which included an illegitimate child, murder, and bombing. The denouement had quite the explaining to do but managed to sort it all out. Only two recipes in the appendix, Quick Cassoulet and Tartines.

A.L. Herbert writes a rare type of cozy series, with mostly black characters who speak dat ole Suth'n dialect, although not so heavily as to create difficulty for the reader. The series is set in her home of Prince George's County, Maryland. She is black herself and grew up in the area, so the toxic tweeters can't do anything against her.

The protagonist was Mahalia Watkins, proprietor of Mahalia's Sweet Tea, a soul food restaurant in the county. The denouements were not the usual held-at-gunpoint dramas, for Watkins was smart enough to let the police know.

MURDER WITH MACARONI AND CHEESE (2016) had Watkins' high school reunion organizing committee asking her to cater the event. Macaroni and cheese, chicken wings, and chocolate marshmallow cakes. They were on a budget.

The reunion was a mashup of extramarital affairs, megachurch gossip, and old scandals from days gone by. Raynell Rollins, who had been a mean girl in high school, seemed to be in the centre of every event, present or past. She made it halfway through the novel before becoming the corpse.

The melodramas were everywhere. Watkins was busy with her restaurant, and her Marpleing was hampered by her idiot cousin Wavonne. Normally Miss Marples commit break-and-enter in search of clues, but Wavonne figured the deceased had no further use for those designer dresses and shoes.

The ending was unusual for a cozy. Only in the last decade or so have cozies begun to acknowledge cellphones, but few Miss Marples use smartphones for research. Invariably they forget to recharge the battery and have a dead phone at the denouement so they can't call for help. It seems that everyone in the world recharges their cellphones overnight except Miss Marples.

In this novel, Watkins actually used a smartphone to research the characters. She found incriminating evidence against Rollins's assistant on a LinkedIn page. The motive was to cover up an art theft.

The recipes alternated with chapters throughout the book. They began with Macaroni And Cheese, making me wonder why anyone would need to know how it is prepared. The final recipe was Country Grits And Sausage Casserole. I've never been south of the Mason-Dixon line and that one wouldn't encourage me to make the trip.

MURDER WITH COLLARD GREENS AND HOT SAUCE (2019) was the next novel in the series. A hairdresser convention was in town and business was booming at the Sweet Tea restaurant. In particular, the collard greens were very popular. Not quite as popular was fashionista Monique Dupree who was shot to death shortly after the recipe for Smothered Pork Chops.

Watkins went sleuthing. The beauty industry was ruthless but this seemed to be stretching it. After her initial investigations began there was a brief pause for a Collard Greens recipe, which convinced me to stick with the barbecue foods we have here out west. Boiling vegetables for two hours should be a felony offense.

The denouement revealed the murder was the result of a love triangle, but the murderer shot Dupree by mistake, intending to kill someone else. After that, nothing much left to do but drink some Purple Rain Iced Tea (made with blueberries) from the final recipe.

STRANGLED EGGS AND HAM (2019) by Maddie Day (pseudonym of Edith Maxwell) was a novel in a cozy series about Robbie Jordan of South Lick, Indiana, proprietor of Pans 'N Pancakes. When not scrambling eggs for her customers, she was the resident Miss Marple.

The villagers were up in arms about a real estate development that would ruin a scenic view. One of the protestors was found dead under suspicious circumstances. That proved good for business at the restaurant, which might have been better named Gossip Central. Jordan lamented: *I was starting to feel like I lived in Cabot Cove. But this wasn't Maine. It wasn't a television show. I wasn't Jessica Fletcher.* Not by much she wasn't.

The restaurant was humming with customers. On top of the rush, the staff were planning for National Waffle Day on August 24, and National Banana Split Day on August 25. How did I miss those two? Jordan did most of her Marpleing while slinging pancakes and eavesdropping on customers.

The murder had been triggered by a combination of personal feuds and power politics over the real estate development. From there to the recipes appendix, which began with Southern Jam Cake, followed by Spiced Roasted Potatoes. Skip the Cucumber Dill Soup but go for the Chocolate Chocolate-Chip Muffins.

DYING FOR A TASTE (2017) by Leslie Karst was the debut novel in a cozy series about Sally Solari of Santa Cruz, California. Her life was in turmoil after her mother's death from cancer, forcing her to quit her job as an attorney, in order to help her father run the family restaurant. Matters went from bad to worse when her Aunt Letta, who had her own restaurant called the Gauguin, was murdered.

The sous chef was the main suspect. Solari found herself working in two restaurants while taking up amateur detecting. In her will, Letta left her restaurant to Solari. The murder proved good for business and brought in a crowd. As the saying goes, there's no such thing as bad publicity.

The killer used poison, natural toxins from certain species of garden plants added to the victims' drinks. He almost got Solari. When she proved to have a cast-iron stomach, he attempted vehicular homicide. The motive was a romantic entanglement with Letta that went wrong.

After the denouement, there was a brief set-up for future novels, as Solari was going to be busy with two restaurants. The recipes appendix began with Endive And Leek Gratin, then on to Linguine With Clam Sauce and Seared Pork Chops With Apricot Brandy Sauce.

A MEASURE OF MURDER (2017) was the sequel. As if two restaurants weren't keeping her busy enough, she signed up to sing in a choir. That last activity got her into Miss Marple mode when Kyle Copman, a tenor in the choir, fell to his death from a window. It looked accidental but his girlfriend thought he was pushed.

Solari spent a lot of time planning menus for months ahead and constantly hiring new cook and wait staff. For restaurants relying on fresh ingredients from local suppliers, many of the items had to be ordered in advance to guarantee a supply. Little infodumps were scattered through this novel on the practical details and back room work that took up as much of Solari's time as any actual cooking.

Then there was the Marpleing and choir practice, making the reader wonder how Solari found time to sleep. A fire in the Gauguin kitchen pepped up the action, followed by other alarums as Solari got closer to the murderer. The culprit was adjusting the line of inheritance of the Copman estate and trying to clear away nosy biddies like Solari.

The recipes appendix began with Grilled Cheese Sandwich (really? you need a recipe?) followed by three full pages for the Caesar Salad. More complicated recipes were the Spaghetti Alla Carbonara and Grilled Salmon WIth Papaya And Avocado.

DEATH AL FRESCO (2018) was the third novel in the series. Sally Solari, as busy as she was, decided to take a painting class, seeing as her restaurant was named after Paul Gauguin. It wasn't as peaceful as all that of course.

Her dog sniffed out a body on the beach, a fisherman who was last seen staggering home drunk after imbibing at the Solari family restaurant. Her father was accused of criminal negligence for letting the man go home inebriated, so she went into Marple mode.

Solari was still trying to handle both restaurants. Her father had advertised a Columbus Day special as a matter of Italian pride but she was worried it was politically incorrect. She was right, and not all the alarums that followed had to do with the murder.

The dead man was ruled to have died accidently but Solari kept snooping. The trail led to food poisoning of the deliberate type, then to the man's girlfriend who may have wanted his inheritance.

The woman startled Solari by showing up at Gauguin. As she ate the Albacore Steak Florentine, Solari tried to interrogate her. More excursions followed, and Solari barely survived the murderer, a man jealous of a romantic affair.

Thus to the recipes appendix, beginning with Spinach Salad With Orange, Fennel, And Black Olives. For the main course, choose from Black Cod, Tagliarini, or Duck A La Lilikoi (passion fruit). Thus we depart Santa Cruz with a final cry of Gustare!

A KILLER CAKE (2012) by Jessica Beck (pseudonym of Tim Myers) was a novel in a cozy series about Victoria Nelson of Jasper Falls, North Carolina. She and her family operated the Charming Moose Diner. Not her name for it; the previous generation chose the name.

As the novel began, she evicted local old coot Roy Thompson from the diner for bad manners and verbally abusing the wait staff, and banned him. This was just when the village was celebrating its bicentennial and the diner had prepared the cakes for the ceremony. Thompson died after eating a piece at the dais. The cry of "Poison!" immediately went up.

There were a plentitude of suspects, for Thompson made many enemies. The preliminary sleuthing uncovered ex-girlfriends and investors who had lost money from his deals. After a stop at the end of Chapter 5 for Homemade Chicken Noodle Soup, the search for the poisoner continued.

Business at the diner didn't seem too affected, although dessert sales were noticeably down. Carrying on from the recipe for Homemade Chicken Pot Pie, the alarums piled up, as well as a few excursions, the final one of which trapped Nelson with the murderers. They were a brother-sister pair concerned about being cut out of Thompson's inheritance.

CAST IRON MOTIVE (2016) by Jessica Beck (pseudonym of Tim Myers) was a novel about twin siblings Patrick and Annie Marsh of Maple Creek, North Carolina. They operated the Cast Iron Store and Grill, a combination general store, post office, and diner.

Their Aunt Della called them for help, worrying that someone was trying to kill her. A look-alike woman was murdered, and with that the plot began. The Marsh siblings' store hardly got a look-in, although other diners and general stores were visited in detail. Likewise the reader will learn how to cook with cast iron skillets in Della's kitchen. There's a knack, you know.

The murderer was trying to cover up some thefts. As she wove her tangled web, she had to commit more and more crimes to disguise the previous ones. That ended with the standard gunpoint denouement.

On to the appendix, which had two recipes, Breakfast Frittata and Crisp Apple Crunch. Guess what kind of cooking implement was specified for best results.

DEATH ON TAP (2017) by Ellie Alexander (pseudonym of Kate Dyer-Seeley) was the first novel in a cozy series about Sloan Krause of Leavenworth, Washington State. She worked for her in-laws microbrewery but not after catching her husband Mac shagging the barmaid.

Krause moved down the street to a new life and a new job at the Nitro microbrewery and pub, owned by Garrett Strong. He was working on his latest recipe, the Pucker Up pale ale made from citrus fruits.

The soon-to-be ex-Mrs Krause was asked to pep up the pub menu. Strong's idea of a menu was salted nuts and pretzels, but the state inspector had told him the pub's licence required serving meals on a plate.

The plot pepped up when Krause found a brewery competitor, Eddie Deluga, dead in one of the fermenting tanks, and not from drowning. Nearby was a copy of the still-secret recipe for Pucker Up. Mac had offered to buy the recipe for his family's brewery but Strong refused. Mac and Deluga had a history, so the Deppity Dawgs had their suspect.

Krause had her own Marpleing to do as she was drawn into events, plus her family had its own share of melodrama. There was a fraudulent hops farm that bilked Mac for big money. A woman scorned was stalking various men, she having had a various love life.

The con man had murdered Deluga, who was on to his scheme, and the woman was the recipe thief. Surprisingly there was no Miss Marple held-at-gunpoint confrontation. Krause called the police, who rounded up the murderer while she watched from a safe distance.

THE PINT OF NO RETURN (2018) was the sequel. Oktoberfest was underway. Nitro was introducing its latest offering, Cherry Weizen, a beer made from Washington cherries. Sloan Krause was a busy woman, with an impending divorce, family problems, and operating a pub.

If that was all, this wouldn't be a cozy, just a melodrama. Therefore, to liven up the plot, a film crew arrived in the village to produce a documentary WISH YOU WERE BEER. The compere of the movie was Mitchell Morgan, an obnoxious ill-mannered boor who was the obvious murder victim, and who didn't disappoint in fulfilling that role.

A smashed growler of Cherry Weizen was found next to the body. The coroner's report said he had been drugged. The impressive aspect was that the toxicology report came back the next day. Everywhere else in North America, the medical examiner laboratories operate with at least two weeks backlog. This village had a laboratory that provided next-day service with the ability to analyse exotic poisons in a few hours.

Meanwhile, amidst various alarums, Krause was busy sloshing out the beers to tourists in the Nitro pub. She did manage to get in some Marpleing, which got her the standard confrontation with the murderer. Instead of a gunpoint drama, Krause was drugged with the same substance used to kill Morgan. The killer had been embezzling from the film company and had to silence Morgan. An Oktoberfest never to be forgotten.

BEYOND A REASONABLE STOUT (2019) was the third novel in the series. The time was the lull in the tourist trade between Oktoberfest and the Christmas season. Sloan Krause and Garrett Strong were working on a new pair of beers at the Nitro microbrewery, pine hops and chocolate-hazelnut stout.

Paradise was threatened during the municipal elections when councillor Kristopher Cooper announced he was running for re-election on the temperance platform. He wanted to make Leavenworth a dry village. The entire economy depended on tourists visiting to sample the microbrews, so his campaign was not a popular one.

His subsequent murder narrowed the list of suspects down to almost everyone in the county. Krause didn't find the body, much to the surprise of all, but she did go sleuthing to discover the murderer. First things first though, as she paused for a detailed recipe on how to make stovetop popcorn and why it was so much superior. I skimmed over that part as I prefer the old-fashioned method of sticking a bag of Redenbacher's into the microwave oven, as God and Orville intended.

On with the investigation though, as back stories were dug out, interspersed with microwaved potato dumplings and sausage. Go figure. The new brews had to be prepared, and no one went more than two chapters without a snack, sometimes microwaved, sometimes not.

The murderer was finally run in. His motive was a failed business deal with Cooper. After the denouement, the final chapter set up the next novel with an assortment of ominous forebodings. And so, washing down pine shortbread with Cherry Weizen beer, we bid adieu to Leavenworth.

Cookbooks.

TOO HOT TO HANDLE (2007) by Mary Jane Maffini was a novel in a series about Fiona Silk of St Aubaine, Quebéc. A professional author by trade, her romance novels weren't selling, she was going through a nasty divorce, and her home was in danger of being sold for unpaid taxes.

Her agent suggested she write an erotic cookbook, which would have been easier if she had a decent sex life or could cook. Nevertheless she gave it a try.

The recipes alternated with the chapters. Silk got herself entangled with a fraudster who stopped at nothing. The death toll kept her and the police busy.

The recipes ranged widely over what might be supposed as erotic cuisine. The Garlic Shrimp seemed offputting, while the Romantic Steak Dinner was closer to the mark. One recipe was Whipped Cream, short enough that I can quote it in its entirety: *Apply whipped cream to selected areas. See what happens.*

Lorna Barrett has a cozy series set in Stoneham, New Hampshire, where Tricia Miles operated the bookshop Haven't Got A Clue, which specialized in mystery fiction. The village was in desperate straits so the council dubbed it Booktown in imitation of Hay-On-Wye and tried for the tourist trade.

There were several bookstores, each on a specialized topic. Presumably they all had Internet sales to help them in the off-season. Miles's sister Angelica operated the Cookery, specializing in cookbooks, with a small café attached. Tricia spent more time solving murders than reading or selling them.

CHAPTER AND HEARSE (2010) got off to a rough start for Angelica. She had just published a cookbook but the launch party was a disaster. An even worse disaster was a natural gas explosion nearby that injured her sometimes-boyfriend Bob Kelly and killed Jim Roth, the owner of History Repeats Itself, a bookstore specializing in, well, you can guess.

Tricia was kept busy with more than just Marpleing. Between her employees and Angelica, she was basically a social worker, not an amateur sleuth. Roth and Kelly both had minor peccadillos. It was a woman scorned who went after Roth.

Everyone in the village was scraping by. Stoneham qua Booktown was suffering the economic blues. Bookstores are a luxury, and in a village that depended on them, any slump in book sales spread to everyone else. Much like Alberta and the pipelines, actually.

BOOK CLUBBED (2014) was the next installment in the series. It began with the death of Betsy Dittmeyer, the Chamber of Commerce receptionist, just as Angelica took the reins as president. Dittmeyer was crushed to death when a bookcase of Angelica's cookbooks toppled over on top of her. The autopsy showed she had been half strangled before the bookcase finished the job. A few days later, someone burned down her house.

The investigation, Tricia Miles's, not the police, turned up a huge quantity of illicit secrets, such as blackmail, unwanted pregnancies (three by the end of the book), incest, and enough white trash drama to horrify Tobacco Road.

Besides the usual break-and-enter, criminal trespass, and contaminating a crime scene, Miles added computer hacking to her accomplishments. She had learned enough about personal computers to be able to guess Dittmeyer's password, then copied all the files.

Miles hardly had time to look into her bookstore. It was just as well, since the murderer burned it down. The revelation of the murderer's identity seemed like an anti-climax after watching a wood-frame building full of books burn.

FINAL SENTENCE (2013) by Daryl Wood Gerber was the first novel in a cozy series about Jenna Hart, a big-city gal who moved back to Crystal Cove, California. She helped her Aunt Vera open a bookstore café, The Cookbook Nook. For the grand opening, Jenna's college roommate Desiree Divine, now a celebrity chef, was to appear for a cookbook signing. Alas, the bookstore café had to go on without Divine. Jenna found her body on the beach.

The death didn't seem to affect business. Indeed, the scenes where customers gushed over the wonderful selection of cookbooks were more nauseating than the corpse.

"*Yoo-hoo" A string-bean-shaped customer standing at the far side of the store beckoned a stouter female. "Look at this" She was holding up THE GOURMET COOKBOOK, Volume 1. "The pages are gilded. No photographs though, only drawings. But the recipes look yummy.*"

The other female rushed to her, waving another cookbook. "I found the BAREFOOT CONTESSA FOOLPROOF RECIPES YOU CAN TRUST. I hope her fabulous chicken salad recipe is in it."

"*Girls, look," a customer shouted to her cluster of pals by the bay window at the front of the store. "Culinary mysteries. Oh, get these cute titles. ... She giggled. "Ooh, and there are recipes inside. What fun.*"

Divine had a past with men, way too many of them. One of those men she had done wrong lashed back at her with lethal effect. Not much more to say, so on with the recipes that form the appendix to this novel.

There was nothing hispanic about the Mexican Wedding Cookies (sugar cookies with chopped nuts), and one presumes the Maple Leaf Rag Cookies were justified because they contained maple syrup. The Chocolate Peanut Butter Bonbons speak for themselves (1 cup peanut butter, 2 cups sugar, half-cup butter, among other fattening items).

GRILLING THE SUBJECT (2016) opened with excitement in Crystal Cove. The Wild West Extravaganza done rode into town and plenty of folk got a hankering for barbecue food. Jenna Hart saw her golden opportunity and moved all her stock of barbecue books to the front display in hopes of quick sales. She was not disappointed.

Hart didn't neglect the store. Turnover was very good. In particular, the books about chuckwagon cooking were flying off the shelves. Tourists apparently liked that sort of food. I've eaten off the backs of chuckwagons countless times during the Calgary Stampede rodeo. I don't see the advantage of tailgate food preparation, but they like it in Crystal Cove.

Since that didn't provide much of a plot, Sylvia Gump got herself murdered and then slow-roasted in a bonfire. She had been feuding with all of her neighbours, including Hart's father. The list of suspects was everyone in the village who knew the deceased, so Hart had no difficulty unearthing lots of back stories. She managed to spend some time at the rodeo before going out and catching the murderer, a man scorned in love by Gump.

The recipes section had the expected barbecue recipes, with many sauces, chili, and grilled this or that. However the Gluten-Free Cowboy Cookies were something that only a city slicker would ask for. Any self-respecting cowpuncher out on the range would sneer at them.

SIFTING THROUGH CLUES (2019) began with the village celebrating Book Club Bonanza Week. Book clubs were descending upon it for the events. Jenna Hart was anticipating good sales in her store.

Another event she anticipated was a moveable feast organized by the Mystery Mavens club, which went from house to house for different dishes and discussions about whodunits. That trip ended in murder on the last stop of the tour. The main suspect was a friend of Hart, so she went Marpleing.

The deceased was Ivy Beale, a shopkeeper down the street who had accumulated many enemies. Some of them she didn't know about, so oblivious was she to the feelings of others. There were no lack of suspects.

Hart managed to uncover quite a few back stories considering how busy her shop was. Cookbooks were flying off the shelves as apparently a good part of California had decided to drive to the village and buy that cookbook they always wanted. (Amazon? That's a river, isn't it?) One wondered though, how many of those cookbooks would actually be used.

The final confrontation with the murderer revealed he was a blackmailer who tangled with Beale the hard way and solved that problem with a poisoned cream puff.

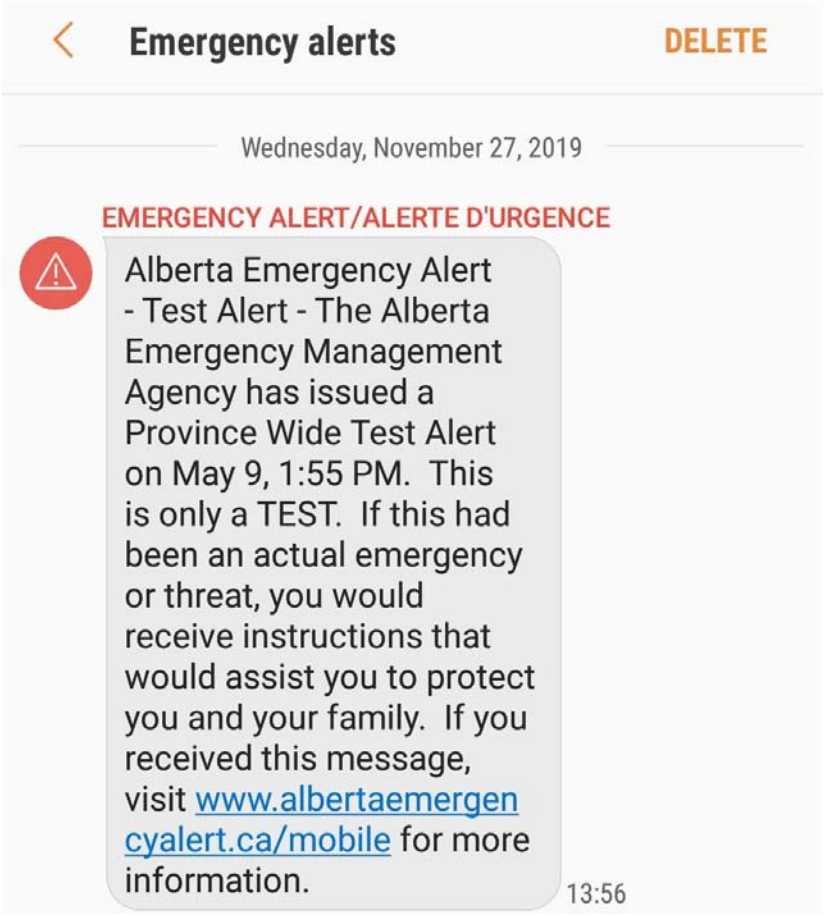
The recipes appendix came in two sections, sweets and savouries. No cream puff recipe in the sweets section fortunately, but the table of contents was doubled because each cupcake or cookie recipe had a gluten-free version. The savouries section was a long list of sandwiches, with nothing said about gluten.

THE NUMBER YOU HAVE DIALED: PART 2
by Dale Speirs

[Part 1 appeared in OPUNTIA #413.]

It was mandated a few years ago by the federal Ministry of Communications that all cellphones running on LTE or better must receive messages via text twice a year testing the emergency alert system. The dates are in May and November, and if the system was operating properly, which is not a given, about 30 million Canadians get a text alert simultaneously.

It is not popular but there is no opt out procedure, and the telecoms are required to override any attempts to block the calls. The basic law is federal but each province or territory operates its own system via their disaster response agency. On November 27, Albertans got the latest test, as shown below as a screenshot from my smartphone. Before reading any further, look closely and see if you can spot the oddity.



The Alberta Ministry of Public Safety evidently did not hire a proofreader. It certainly didn't inspire confidence and I wrote as much in an email to the Ministry. They were quick to respond as below.

Subject RE:Text alert had wrong date(ACR-568204)
From AlbertaConnects@gov.ab.ca <AlbertaConnects@gov.ab.ca>
To: opuntia57@yahoo.ca <opuntia57@yahoo.ca>
Date Wed, 27 Nov 2019 at 16:06

**********please do not reply THIS EMAIL ADDRESS IS NOT MONITORED **********

Thank you for visiting the Alberta Government feedback web site. Following is the response to your question prepared by Municipal Affairs :

The test alert issued on November 27 displayed the incorrect date of May 9 due to a technical issue.

We apologize for any confusion, but also want to emphasize the importance of conducting these tests to help identify potential issues like this.

We are working with our partners to address this and to ensure it doesn't happen again.

In the meantime, we encourage you to download the Alberta Emergency app from www.emergencyalert.alberta.ca/content/about/signup.html

On 2019-11-27 14:24:00.0 you wrote:

The test alert sent today was dated May 9. How seriously do you think we should take any real alerts if you can't even proofread.

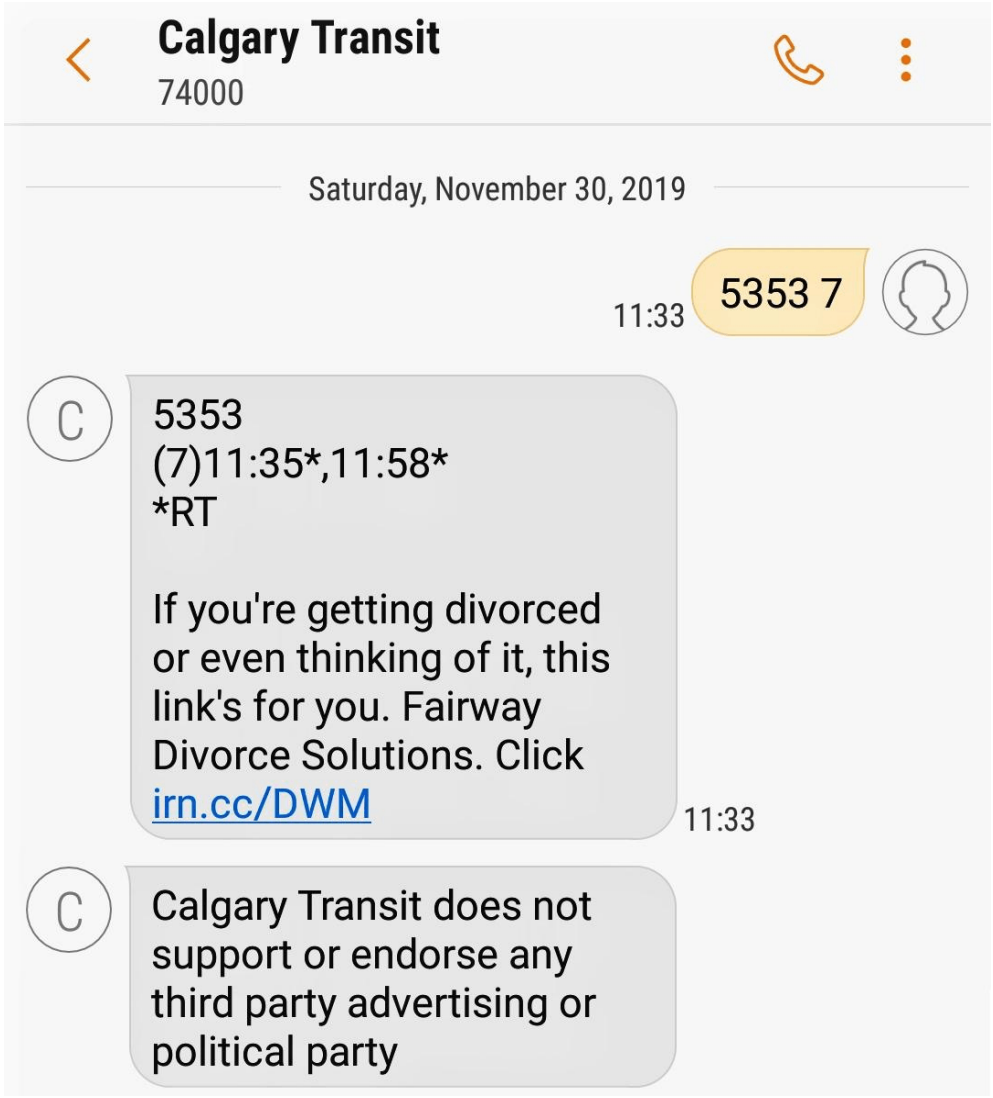
The Alberta feedback site is constantly updated to provide you with important information about Alberta programs and services. Please visit www.alberta.ca. (AC-568204)

**********please do not reply THIS EMAIL ADDRESS IS NOT MONITORED **********

There you have it. Proofreading and attention to detail are technical issues. If OPUNTIA has a typographical error, that doesn't really matter, but disaster responders need to be held to a higher standard.

A wrong date is not a serious error in this context, but it does indicate a problem with the corporate culture of the agency. Albertans still remember what happened a couple of years ago when Hawaiians received a false warning on their text system of incoming missiles from North Korea.

Meanwhile, Calgary Transit sells advertising everywhere it can, on bus stop benches, the buses themselves, and its Teletext service. Only on the latter does CT include a disclaimer, which baffles me because the same legal caution should be attached to physical signs. I suspect some lawyer was trying to justify his retainer.



Teletext, by the way, is a very useful feature that tells users when the next two buses will arrive. Every bus stop in the city has a four-digit number. Simply text that stop number plus the route number and the CT computer will bounce back the next two bus arrivals. All buses have GPS transponders, so the computer tracks them and can predict how long until they arrive.

The Alberta provincial election on April 16 this year saw the NDP government of Rachel Notley turfed after the Dippers nearly bankrupted the province. The Tories are now trying to put the economy back on an even keel.

No one in Alberta had ever heard of Alberta Proud, which was apparently an outside right-wing group who barged into our politics. They set up equivalents in other provinces such as Ontario Strong.

SEEN IN THE LITERATURE

Eales, S., et al (2020) **Do bulges stop stars forming?** MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY 491:69-79

Authors' abstract: *In this paper, we use the Herschel Reference Survey to make a direct test of the hypothesis that the growth of a stellar bulge leads to a reduction in the star formation efficiency of a galaxy (or conversely a growth in the gas-depletion time-scale) as a result of the stabilization of the gaseous disc by the gravitational field of the bulge.*

We find a strong correlation between star formation efficiency and specific star formation rate in galaxies without prominent bulges and in galaxies of the same morphological type, showing that there must be some other process besides the growth of a bulge that reduces the star formation efficiency in galaxies.

However, we also find that galaxies with more prominent bulges (Hubble types E to Sab) do have significantly lower star formation efficiencies than galaxies with later morphological types, which is at least consistent with the hypothesis that the growth of a bulge leads to the reduction in the star formation efficiency.

The answer to the question in the title is therefore yes and no: bulges may reduce the star formation efficiency in galaxies but there must also be some other process at work. We also find that there is a significant but small difference in the star formation efficiencies of galaxies with and without bars, in the sense that galaxies with bars have slightly higher star formation efficiencies.

Gänsicke, B.T., et al (2019) **Accretion of a giant planet onto a white dwarf star.** NATURE 576:61-64

Authors' abstract: *The detection of a dust disk around the white dwarf star G29-38 and transits from debris orbiting the white dwarf WD 1145+017 confirmed that the photospheric trace metals found in many white dwarfs arise from the accretion of tidally disrupted planetesimals. The composition of these planetesimals is similar to that of rocky bodies in the inner Solar System.*

Gravitational scattering of planetesimals towards the white dwarf requires the presence of more massive bodies, yet no planet has so far been detected at a white dwarf. Here we report optical spectroscopy of a hot (about 27,750 Kelvin) white dwarf, WD J091405.30+191412.25, that is accreting from a circumstellar gaseous disk composed of hydrogen, oxygen and sulfur at a rate of about 3.3 × 10^9 grams per second.

The composition of this disk is unlike all other known planetary debris around white dwarfs, but resembles predictions for the makeup of deeper atmospheric layers of icy giant planets, with H_2O and H_2S being major constituents. A giant planet orbiting a hot white dwarf with a semi-major axis of around 15 solar radii will undergo substantial evaporation with expected mass loss rates comparable to the accretion rate that we observe onto the white dwarf.

The orbit of the planet is most probably the result of gravitational interactions, indicating the presence of additional planets in the system. We infer an occurrence rate of approximately 1 in 10,000 for spectroscopically detectable giant planets in close orbits around white dwarfs.

McMahon, S. (2019) **Earth's earliest and deepest purported fossils may be iron-mineralized chemical gardens.** PROCEEDINGS OF THE ROYAL SOCIETY OF LONDON 286B:doi.org/10.1098/rspb.2019.2410

Author's abstract: *Recognizing fossil microorganisms is essential to the study of life's origin and evolution and to the ongoing search for life on Mars. Purported fossil microbes in ancient rocks include common assemblages of iron-mineral filaments and tubes.*

Recently, such assemblages have been interpreted to represent Earth's oldest body fossils, Earth's oldest fossil fungi, and Earth's best analogues for fossils that might form in the basaltic Martian subsurface. Many of these putative fossils exhibit hollow circular cross-sections, lifelike (non-crystallographic, constant-thickness, and bifurcate) branching, anastomosis, nestedness within 'sheaths', and other features interpreted as strong evidence for a biological origin, since no abiotic process consistent with the composition of the filaments has been shown to produce these specific lifelike features either in nature or in the laboratory.

Here, I show experimentally that abiotic chemical gardening can mimic such purported fossils in both morphology and composition. In particular, chemical gardens meet morphological criteria previously proposed to establish

biogenicity, while also producing the precursors to the iron minerals most commonly constitutive of filaments in the rock record. Chemical gardening is likely to occur in nature. Such microstructures should therefore not be assumed to represent fossil microbes without independent corroborating evidence.

Servais, T., et al (2019) **Revisiting the Great Ordovician Diversification of land plants: Recent data and perspectives.** PALAEOGEOGRAPHY, PALAEOCLIMATOLOGY, PALAEOECOLOGY 534:doi.org/10.1016/j.palaeo.2019.109280

[The Ordovician era was 488.3 to 443.7 megayears ago.]

Authors' abstract: *Recent molecular clock data suggest with high probability a Cambrian origin of Embryophyta (also called land plants), indicating that their terrestrialization most probably started about 500 Ma. The fossil record of the 'Cambrian Explosion' was limited to marine organisms and not visible in the plant fossil record.*

The most significant changes in early land plant evolution occurred during the Ordovician. For instance, the earliest bryophyte-like cryptospores and the oldest fragments of the earliest land plants are from the Middle and Late Ordovician, respectively.

Organic geochemistry studies on biomarker compositions hint at a transition from green algae to land plants during the 'Great Ordovician Biodiversification Event' (GOBE).

The colonization of the terrestrial realms by land plants clearly had an impact on marine ecosystems. Interactions between the terrestrial and marine biospheres have been proposed and the radiation of land plants potentially impacted on CO_2 and O_2 concentrations and on global climate.

In addition, the shift of strontium isotopes during the Ordovician is probably linked to changing terrestrial landscapes, affected by the first massive land invasion of eukaryotic terrestrial life. The land plants seem unaffected by the first global mass extinction at the end of the Ordovician that eliminated many marine invertebrate taxa.

Adiatma, Y.D., et al (2019) **Did early land plants produce a stepwise change in atmospheric oxygen during the Late Ordovician (Sandbian ~458 Ma)?** PALAEOGEOGRAPHY, PALAEOCLIMATOLOGY, PALAEOECOLOGY 534:doi.org/10.1016/j.palaeo.2019.109341

Authors' abstract: *A stepwise change in atmospheric oxygen levels during the Ordovician has been attributed to the emergence of land plants. This phenomenon is tied to a major baseline shift in the stable carbon isotope ($d^{13}C$) curve and inferred increase in nutrient delivery and enhanced primary productivity in nearshore settings, which led to high organic carbon burial.*

The timing and magnitude of this baseline shift, however, is still elusive in part because of the lack of high-resolution $d^{13}C$ data that span this period. Much of the existing Ordovician $d^{13}C$ literature is focused on isotopic excursions with less emphasis on identifying long-term shifts in baseline (pre- and post-excursion) values.

This study presents new high resolution $d^{13}C$ data from stratigraphic sections at Germany Valley (West Virginia) and Union Furnace (Pennsylvania) in the Central Appalachian Basin. These sections span the entire Sandbian Stage and continue into the lower Katian Stage.

The $d^{13}C$ data from both sections are characterized by relative stability carbon isotope values (mean = -0.61‰) in the lower Sandbian, followed by a + 1.2‰ shift in the upper Sandbian (mean = +0.62‰).

Herein, we propose that the positive shift represents a long-term global shift in baseline $d^{13}C$ values of dissolved inorganic carbon. The timing of this positive shift coinciding with the diversification of early land plants (i.e., bryophytes) supports earlier models that suggested enhanced organic carbon burial rates served as a mechanism for the stepwise oxygenation of the atmosphere during the Late Ordovician.

Speirs: Land plants took carbon out of the atmosphere, rich in CO_2. Some of the carbon was released back into the atmosphere after the plants died and decayed. (This is why, incidently, preservation of old-growth forests is a bad idea; they are net emitters of CO_2.) Much of the carbon, however, was sequestered when dead organic matter was washed into sediments and buried.

McKenna, D.D., et al (2019) **The evolution and genomic basis of beetle diversity.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 116:24729-24737

[Angiosperms are the flowering plants.]

Authors' abstract: *The order Coleoptera (beetles) is arguably the most speciose group of animals, but the evolutionary history of beetles, including the impacts of plant feeding (herbivory) on beetle diversification, remain poorly understood.*

We inferred the phylogeny of beetles using 4,818 genes for 146 species, estimated timing and rates of beetle diversification using 89 genes for 521 species representing all major lineages and traced the evolution of beetle genes enabling symbiontindependent digestion of lignocellulose using 154 genomes or transcriptomes.

Phylogenomic analyses of these uniquely comprehensive datasets resolved previously controversial beetle relationships, dated the origin of Coleoptera to the Carboniferous, and supported the codiversification of beetles and angiosperms.

Moreover, plant cell wall-degrading enzymes (PCWDEs) obtained from bacteria and fungi via horizontal gene transfers may have been key to the Mesozoic diversification of herbivorous beetles, remarkably, both major independent origins of specialized herbivory in beetles coincide with the first appearances of an arsenal of PCWDEs encoded in their genomes.

Furthermore, corresponding (Jurassic) diversification rate increases suggest that these novel genes triggered adaptive radiations that resulted in nearly half of all living beetle species. We propose that PCWDEs enabled efficient digestion of plant tissues, including lignocellulose in cell walls, facilitating the evolution of uniquely specialized plant-feeding habits, such as leaf mining and stem and wood boring.

Beetle diversity thus appears to have resulted from multiple factors, including low extinction rates over a long evolutionary history, codiversification with angiosperms, and adaptive radiations of specialized herbivorous beetles following convergent horizontal transfers of microbial genes encoding PCWDEs.

Zhou, W., et al (2019) **A left-handed fern twiner in a Permian swamp forest.** CURRENT BIOLOGY 29:doi.org/10.1016/j.cub.2019.10.005

Authors' abstract: *The twining habit is a climbing strategy that helps slender plants grow upward by using circumnutation around other plants. In geological history, climbing may have already been present in the first Middle Devonian forests, as indicated by possible climbers among aneurophytalean progymnosperms and lycopsids.*

By the late Carboniferous, climbing was both more common and diverse, preserved in swamp forests with modes of attachment ranging from aerial roots to appendages modified into hooks and tendrils on the leaves.

However, all of these diagnoses of a climbing habit are based upon either indirect morphological characteristics of the purported climber or on direct physical contact with a host plant, but without direct preservation of twining.

Permineralized epiphytes have been preserved in the Carboniferous, but the interpretation of scars purported to have been caused by twiners that have been found on trunk compressions of potential host-plants has been questioned.

Direct preservation of a climber engaged in true twining around a host has only been documented in the Miocene Shanwang Formation of Eastern China, albeit with the identity of the twiner difficult to establish and likely to be a self-twiner.

Here, we report a climbing fern engaged in left-handed twining around a seed plant from the early Permian Wuda Tuff fossil Lagerstätte of Inner Mongolia, China. Moreover, the host plant is likely to also be a climber based on its overall form. Such a climber-climbing-a-climber phenomenon signals the potential ecological complexity of late Paleozoic forests.

Mironenko, A. (2020) **A hermit crab preserved inside an ammonite shell from the Upper Jurassic of central Russia: Implications to ammonoid palaeoecology.** PALAEOGEOGRAPHY, PALAEOCLIMATOLOGY, PALAEOECOLOGY 537:doi.org/10.1016/j.palaeo.2019.109397

Author's abstract: *The discovery of a hermit crab (superfamily Paguroidea) preserved in the likely immature shell of an ammonite, Craspedites nekrassovi is reported from the Upper Jurassic of Moscow, Russia. This is the oldest*

undoubtable symmetrical hermit crab to date which is known from non-reefal environments.

This new occurrence combined with the documentation of numerous sublethal and lethal injuries on ammonite shells in the same beds (probably produced by such paguroids), all suggest that the hermit crabs not only lived in ammonite shells but also hunted these animals.

The proportion of damaged shells (including healed ones) varies in different Upper Jurassic ammonite genera from 1.2% in Kachpurites up to 9.3% in Craspedites.

Among damaged Kachpurites only 6.25% survived attacks whereas among Craspedites the percentage of survivors was 87.5%. These data imply that Craspedites likely lived near the sea bottom and often encountered hermit crabs, whereas Kachpurites likely lived in the water column.

Larsson, C.E., et al (2019) **New skulls and skeletons of the Cretaceous legged snake Najash, and the evolution of the modern snake body plan.** SCIENCE ADVANCES 6:doi.org/10.1126/sciadv.aax5833

Authors' abstract: *Snakes represent one of the most dramatic examples of the evolutionary versatility of the vertebrate body plan, including body elongation, limb loss, and skull kinesis. However, understanding the earliest steps toward the acquisition of these remarkable adaptations is hampered by the very limited fossil record of early snakes.*

Here, we shed light on the acquisition of the snake body plan using micro-computed tomography scans of the first three-dimensionally preserved skulls of the legged snake Najash and a new phylogenetic hypothesis. These findings elucidate the initial sequence of bone loss that gave origin to the modern snake skull.

Morphological and molecular analyses including the new cranial data provide robust support for an extensive basal radiation of early snakes with hindlimbs and pelves, demonstrating that this intermediate morphology was not merely a transient phase between limbed and limbless body plans.

González, R., et al (2019) **Early growth dynamics of titanosaur sauropods inferred from bone histology.** PALAEOGEOGRAPHY, PALAEOCLIMATOLOGY, PALAEOECOLOGY 537:doi.org/10.1016/j.palaeo.2019.109404

Authors' abstract: *Histological studies have proven to be a powerful tool for addressing sauropod paleobiology, with most focus on adult and subadult individuals. The aim of this study is to describe long bone histology (femur) in early juvenile titanosaur sauropods, to expand our knowledge about early stages of development.*

The material consists of two small femora of indeterminate titanosaurs from the Upper Cretaceous Bajo de la Carpa and Allen formations of Argentina. Both femora from juvenile specimens show predominant fibrolamellar bone tissue with plexiform vascularization pattern, suggesting a fast growth rate. Despite the early stage of development of the studied specimens, secondary remodelling is evident in one of them.

In the other sample, a growth mark is observed, which suggests unexpected cyclical growth and a possible departure from the typical growth strategy of sauropod dinosaurs. In addition, we examine indeterminate long bones of titanosaur embryos from the Anacleto Formation of Argentina.

The embryos shows poor development of cortical bone, high density of large simple canals and presence of Kastschenko's line suggest that these individuals died during an early stage of ossification. This study reveals that the early growth of at least some titanosaurs departs from the reported in neosauropod dinosaurs.

Bao, T., et al (2019) **Pollination of Cretaceous flowers.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 116:24707-24711

[Flowering plants did not begin evolving until after the dinosaurs had become prominent. Before them, all large land plants were ferns, cycads, and conifers.]

Authors' abstract: *Since Darwin, insect pollination was thought to be a key contributor to the Cretaceous radiation of angiosperms. Both insects and angiosperms were common during the mid-Cretaceous, but direct evidence for a Cretaceous insect-angiosperm pollination mode was until now absent.*

Here, we report a specialized beetle-angiosperm pollination mode preserved in Burmese amber where a tumbling flower beetle is carrying tricolpate pollen grains that belongs to the eudicots that comprise the majority of extant angiosperm species.

Our study provides direct evidence of insect pollination of Cretaceous flowers, which is further supported by the flower-visiting body shape, specialized pollen-feeding mouthparts, and zoophilous pollen grains. These findings demonstrate that insect pollination of flowering plants was well established 99 million years ago.

Insect pollination of flowering plants (angiosperms) is responsible for the majority of the world's flowering plant diversity and is key to the Cretaceous radiation of angiosperms. Although both insects and angiosperms were common by the mid-Cretaceous, direct fossil evidence of insect pollination is lacking. Direct evidence of Cretaceous insect pollination is associated with insect-gymnosperm pollination.

Here, we report a specialized beetle-angiosperm pollination mode from mid-Cretaceous Burmese amber (99 mega-annum [Ma]) in which a tumbling flower beetle (Mordellidae), Angimordella burmitina gen. et sp. nov., has many tricolpate pollen grains attached. A. burmitina exhibits several specialized body structures for flower-visiting behavior including its body shape and pollen-feeding mouthparts revealed by X-ray microcomputed tomography.

The tricolpate pollen in the amber belongs to the eudicots that comprise the majority of extant angiosperm species. These pollen grains exhibit zoophilous pollination attributes including their ornamentation, size, and clumping characteristics. Tricolpate pollen grains attached to the beetle's hairs are revealed by confocal laser scanning microscopy, which is a powerful tool for investigating pollen in amber.

Our findings provide direct evidence of insect pollination of Cretaceous angiosperms, extending the range insect-angiosperm pollination association by at least 50 million years. Our results support the hypothesis that specialized insect pollination modes were present in eudicots 99 million years ago.

[The image, from this paper, is a reconstruction of the fossilized beetles and flowers.]

Ameen, C., et al (2019) **Specialized sledge dogs accompanied Inuit dispersal across the North American Arctic.** PROCEEDINGS OF THE ROYAL SOCIETY OF LONDON 375B:doi.org/10.1098/rspb.2019.1929

Authors' abstract: *Domestic dogs have been central to life in the North American Arctic for millennia. The ancestors of the Inuit were the first to introduce the widespread usage of dog sledge transportation technology to the Americas, but whether the Inuit adopted local Palaeo-Inuit dogs or introduced a new dog population to the region remains unknown.*

To test these hypotheses, we generated mitochondrial DNA and geometric morphometric data of skull and dental elements from a total of 922 North American Arctic dogs and wolves spanning over 4500 years. Our analyses revealed that dogs from Inuit sites dating from 2000 BP possess morphological and genetic signatures that distinguish them from earlier Palaeo-Inuit dogs, and identified a novel mitochondrial clade in eastern Siberia and Alaska.

The genetic legacy of these Inuit dogs survives today in modern Arctic sledge dogs despite phenotypic differences between archaeological and modern Arctic dogs. Together, our data reveal that Inuit dogs derive from a secondary pre-contact migration of dogs distinct from Palaeo-Inuit dogs, and probably aided the Inuit expansion across the North American Arctic beginning around 1000 BP.

Wang, M., et al (2019) **The polar regions in a 2˚C warmer world.** SCIENCE ADVANCES 5:doi.org/10.1126/sciadv.aaw9883

Authors' abstract: *Over the past decade, the Arctic has warmed by 0.75˚C, far outpacing the global average, while Antarctic temperatures have remained comparatively stable. As Earth approaches 2˚C warming, the Arctic and Antarctic may reach 4˚C and 2˚C mean annual warming, and 7˚C and 3˚C winter warming, respectively.*

Earth has warmed by approximately 0.8˚C since the late 19th century, while the Arctic has warmed by 2˚ to 3˚C over the same period. Conversely, the Antarctic has experienced more pronounced interannual and decadal variation in mean annual temperature anomalies than the Arctic, with no obvious upward trend in the last two decades.

Spatially, observed warming has been markedly heterogeneous in both regions during the more recent instrumental satellite record (since 1986), with both warming and spatial variability in warming having increased more for the Arctic than the Antarctic over the past 13 years. Therefore, despite similarities in defining characteristics such as pronounced seasonality and the year-round presence of ice and snow, these two regions may face different futures in response to ongoing warming.

Trumble, B.C., and C.E. Finch (2019) **The exposome in human evolution: from dust to diesel.** QUARTERLY REVIEW OF BIOLOGY 94:333-394.

Authors' abstract: *Global exposures to air pollution and cigarette smoke are novel in human evolutionary history and are associated with at least 12 million premature deaths per year. We investigate the history of the human exposome for relationships between novel environmental toxins and genetic changes during human evolution in six phases.*

Phase I: With increased walking on savannas, early human ancestors inhaled crustal dust, fecal aerosols, and spores; carrion scavenging introduced new infectious pathogens.
Phase II: Domestic fire exposed early Homo to novel toxins from smoke and cooking.
Phases III and IV: Neolithic to preindustrial Homo sapiens incurred infectious pathogens from domestic animals and dense communities with limited sanitation.
Phase V: Industrialization introduced novel toxins from fossil fuels, industrial chemicals, and tobacco at the same time infectious pathogens were diminishing. Thereby, pathogen-driven causes of mortality were replaced by chronic diseases driven by sterile inflammogens, exogenous and endogenous.
Phase VI: Considers future health during global warming with increased air pollution and infections. We hypothesize that adaptation to some ancient toxins persists in genetic variations associated with inflammation and longevity.

Choe, K.W., et al (2019) C**alculated avoidance: Math anxiety predicts math avoidance in effort-based decision-making.** SCIENCE ADVANCES 6:doi.org/10.1126/sciadv.aay1062

Authors' abstract: *Math anxiety, negative feelings toward math, is hypothesized to be associated with the avoidance of math-related activities such as taking math courses and pursuing STEM careers. However, there is little experimental evidence for the math anxiety-avoidance link. Such evidence is important for formulating how to break this relationship.*

We hypothesize that math avoidance emerges when one perceives the costs of effortful math engagement to outweigh its benefits and that this perception depends on individual differences in math anxiety. To test this hypothesis, we developed an effort-based decision-making task in which participants chose between solving easy, low-reward problems and hard, high-reward problems in both math and nonmath contexts.

Higher levels of math anxiety were associated with a tendency to select easier, low-reward problems over harder, high-reward math (but not word) problems. Addressing this robust math anxiety-avoidance link has the potential to increase interest and success in STEM fields.