OPUNTIA 490

Saturnalia 2020

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'TIS THE SEASON

photos by Dale Speirs

Strolling about my neighbourhood, mostly by day but once at night. Everyone seem to have bought their decorations this year at the same store. I'm guessing either Rona or Canadian Tire. Reindeers and candy canes everywhere.

Incidently, you can tell when I walked out on a chinook day or a snow day by the amount of bare grass on the lawns.

This homeowner obviously went to the store and bought one of everything. Notice the two giant snow globes on either side of the yard. They'll show up further on in this issue.

A simple clean design is best, I always say.

BOW VALLEY SQUARE ELECTRONIC ART: PART 2
photos by Dale Speirs

[Part 1 appeared in OPUNTIA #487.]

Bow Valley Square is a cluster of skyscrapers in downtown Calgary linked into the Plus-15 pedestrian system that connects about half the skyscrapers at the second floor with an enclosed pedestrian network.

Along the south side, connecting to the Brookfield Place tower across the avenue is this wall of electronic art. The displays by local artists constantly rotate. Here is their winter wonderland.

CHRISTMAS FICTION: PART 4
by Dale Speirs

[Parts 1 to 3 appeared in OPUNTIAs #430, 431, and 463.]

Cozy Mysteries.

Kate Kingsbury (pseudonym of Doreen Roberts Hight) wrote a long series of Christmas cozies set in Badgers End, England, during the Edwardian era. Cecily Sinclair Baxter was the resident Miss Marple, operating the Pennyfoot Hotel when not helping Constable Sam Northcott find murderers. Her husband barely tolerated her sleuthing.

There were two series, one with murders throughout the year and the other only during the Christmas season. The real mystery of both these series is why anyone would book a room in this place, given the odds of not returning home:

*For all who entered the Pennyfoot's walls in December did so at the risk of falling prey to the infamous Christmas curse. Not that such misfortunes were ever advertised, of course. In fact, everyone employed at the club looked forward to the Christmas season with the firm belief that this year would prove to be the exception.***

RINGING IN MURDER (2008) had Cecily Sinclair Baxter helping a friend Madeline Prestwick plan a wedding just before Christmas. The Pennyfoot Hotel had a batch of special Christmas crackers made, one of which contained a pearl brooch as a surprise for a lucky guest.

In keeping with the other Christmas tradition of the hotel, two guests were murdered by an exploding Christmas cracker. Lots of melodramas and histories for Sinclair Baxter to uncover. The result eventually came down to one guest seeking revenge against another.

The murderer still had one cracker loaded with explosives. She was prepared to use it against Sinclair Baxter, but of course the result was different. Certainly an unusual weapon. Makes you think twice at your next Christmas dinner as to whether you will get a funny hat or have your head removed.

** from MISTLETOE AND MAYHEM (2010), page 3, trade paperback edition

MISTLETOE AND MAYHEM (2010) began frivolously when one of the seasonal guests Madeline Prestwick brought along a kissing bough as an ornament for the hotel. The Christmas curse returned when one of the footmen, last seen kissing a maid under the bough, was murdered.

Prestwick's baby was kidnapped. Trouble and strife, alarums and excursions, or in other words, situation normal at the Pennyfoot Hotel. The death toll steadily rose. Sinclair Baxter got herself trapped with the murderer, to no reader's surprise. The killer was obliging about why he throttled all those people, and went on at great length about tying off loose threads. Premeditated murder is like eating salted peanuts; you can't have just one.

HERALD OF DEATH (2011) opened just before Christmas. A string of apparently unrelated murders was not only baffling the police but scaring guests away from the hotel. The deaths would have been classified as unrelated, each happening in a different way, but for the fact that each victim had a gold angel stamped on his forehead.

Other serious matters intervened. The village pantomime was hosted in the hotel ballroom. Anyone ever involved with amateur dramatics will know what that meant. A snowstorm blanketed the area, and there was still Christmas shopping to be done.

Cecily Sinclair Baxter got in some detecting as she made her rounds. Eventually the culprit was identified as an animal rights activist who became an avenging angel for real or imagined cause. She was put away in an institution for the insane which, as Northcott said with a shudder, was worse than the prison system.

THE CLUE IS IN THE PUDDING (2012) took place during the following Christmas. The Pennyfoot Hotel's regular housekeeper was called away on a family emergency. It being Christmas, the employment agency didn't have much available, so they sent as a replacement Beatrice Tucker. She was not good at human relations, spreading trouble and strife throughout the hotel.

Just as bad was actor Archibald Armitage, who was staying at the hotel for the holidays. Alas, he didn't make it past the plum pudding at the big Christmas dinner. Tucker was the prime suspect but Cecily Sinclair Baxter wasn't so sure. The poisoning put a damper on the carol singing.

Armitage was a lady's man and treated them callously. One of them he had stolen from the murderer, then indifferently discarded her. Revenge is a dish best served cold, unlike plum pudding, but the killer did both to avenge the woman he loved.

What has to be the finest ominous foreboding I have ever read was the final line of this novel, spoken to Sinclair Baxter by her husband: *"Just think, we have a whole year before you have to worry about Christmas again.*"

That foreboding came true in MULLED MURDER (2013). Cecily Sinclair Baxter was a busy woman. A housemaid was leaving to get married on Christmas Eve, a plumber was needed for the bathrooms, and the janitor was an argumentative man.

The body, and of course there was a body, was that of Gerald Evans, a guest who was found stabbed to death on the beach. At least it wasn't in the big house. Evans was a private investigator from London, hired to make enquiries about someone unknown at the Pennyfoot Hotel. Sinclair Baxter's Marpleing had to yield frequently to staffing issues on more than one occasion.

A gang of art thieves had infiltrated one of their number into the staff, and were using the wine cellar to hide their loot. The police wouldn't look for it in the big house, and they could move it out once the hue and cry had died down. Except Evans figured it out and complicated their plans. Sinclair Baxter trapped the infiltrator in the cellar by padlocking the doors and then calling the police.

TREACHEROUS TOYS (2012) by Joyce and Jim Lavene was a novel in a series about the Renaissance Faire Village of Myrtle Beach, South Carolina. Jessica Morton was the local Miss Marple, her day job being a college lecturer.

It was Christmas but not the season to be jolly. Toy maker Chris Christmas was murdered while wearing his Father Christmas costume. Too cute by half, even for a cozy. Morton found the body and as she did so, the murderer slugged her unconscious. As a result, the Marpleing was personal.

The Faire had its quota of melodramas that weren't just cosplaying. The defunct enjoyed toying with the ladies, which added several suspects to the list. Others were physically attacked, threatening letters were received, somebody was poisoned, and other alarums kept the paramedics busy. Scarborough Fair it wasn't.

The killer was a woman scorned who went psycho. Murdering people was like eating salted peanuts; betcha can't kill just one.

DEATH OF A NEIGHBORHOOD SCROOGE (2018) by Laura Levine was a novel in a cozy series about Jaine (with an 'i') Austen. She was a freelance writer who was currently house sitting in a Bel Air mansion. Accompanying her was Lance Venable, her gay BFF.

The Van Houten mansion was a stately pile with a cathedral living room the size of an aircraft hanger. There was trouble in paradise though. Next door was Scotty Parker, a former child star best remembered for his role as Tiny Tim in a Scrooge movie and nothing since.

He was now a bitter man who, in the best Scrooge tradition, told neighborhood children that Santa Claus wasn't coming this year because he had a stroke. Parker was currently working on a comeback screenplay THE RETURN OF TINY TIM: VENGEANCE IS MINE!, for which he roped Austen into editing it for him.

Parker's plans gang aft agley when someone beat him to death with a frozen chocolate Yule log. The police had a lengthy list of suspects, including Austen. Since motives were everywhere, Austen went sleuthing.

She picked the wrong man as the culprit. She discovered her error when the real murderer came after her with a knife. Venable saved her by taking out the killer with a fully-loaded champagne bottle. It was, after all, Hollywood.

SIX CATS A SLAYIN' (2018) by Miranda James (pseudonym of Dean James) was set in Athena, Mississippi, where the protagonist Charlie Harris and his cat Diesel were preparing for Christmas.

His next-door neighbour Gerry Albritton was a pushy real estate agent who staged a Christmas party the village would never forget. In her capacity as hostess, she wound up in the morgue, murdered at the party. Albritton had disputes with many of the villagers, so motive wasn't the problem.

Another problem, for Harris at least, was five kittens abandoned on his doorstep, presumably to justify the title of this novel. Diesel tolerated the imposition, but the kittens couldn't stay forever.

Harris went sleuthing into the disputatious life of Albritton, when not busy feeding and cleaning up after the kittens. The investigation revealed that Gerry had been Jerry before he became a she. Different suspects were in the spotlight in succession before the culprit was identified, a relative who didn't like shapeshifters.

In the epilogue it was church for Christmas Eve services, then home to trim the tree, for normal life must win over troubles. The best news of all was that the kittens found new homes.

HAVE YOURSELF A BEARY LITTLE MURDER (2019) by Meg Macy was a novel in a cozy series about Sasha Silverman, who operated the Silver Bear Shop and Factory in the village of Silver Hollow, Michigan. Presumably their commercial and Internet orders kept them solvent, since the demand for teddy bears in a rural village couldn't have been that high.

The Christmas festival was underway but the parade got off to a rough start. The mascot was Santa Bear, played by mayor Cal Bloom, but he wasn't there. Where he was, after a hurried search, was dead. Someone had electrocuted him, then stuffed his corpse inside the Santa Bear suit.

The police investigated as they so often do, but Silverman was the Miss Marple and knew she would solve the case first. She had some help from the Guilty Pleasures Gossip Club. Everyone was rushing to clear the case before Christmas Day.

The dirty gossip soon came out concerning Bloom. Adultery, booze, sharp money, and a big life insurance policy for the widow. The murderer was a woman scorned by Bloom, who went on to increase the death toll, including an attempt to poison Silverman. After the shouting and alarums were done with, life resumed. The Silver Bear Shop had a beary Christmas.

IN PEPPERMINT PERIL (2018) by Joy Avon was the first novel in a new cozy series about Calliope Aspen, who came from the big city to spend Christmas with her grandaunt Iphigeneia, Iphy to her friends. Auntie operated Book Tea, a vintage tea room in Heart's Harbor, Maine. Yes, another soon to be bloodsoaked seaside village now that a Miss Marple, or Jessica Fletcher if you will, had arrived.

Aspen and many others were invited to the local manor house Haywood Hall for a Christmas party. The mansion was presided over by 93-year-old Dorothea Finster, who just publically announced that she was changing her will. Talk about asking for it. Surprisingly though, it was the old family retainer Leadenby who got the honour of the first murder victim.

There were all kinds of family melodramas. The assorted heirs bitterly despised each other while flattering Finster in hopes of a mention in the will. A subplot was a valuable heirloom ring that went missing. Finster pulled a twist on everyone. The money was gone, her heirs were a shiftless lot, and all that remained was Haywood Hall. She was leaving it to Aunt Iphy and Aspen, to be run as a hotel.

The knives came out, especially from those who had embezzled the money and unhappy blackmailers who were hoping to jump the queue for the inheritance they didn't know was gone. Leadenby was going to expose one of the blackmailers, so he had to be silenced. Finster made it to the end of the novel still alive, and Aspen got the big house.

Uncozy Murders.

Carolyn Haines has a lengthy series about Sarah Booth Delaney, who had a part-time detective agency in Zinnia, Mississippi. She and her family struggled to keep their manor going, once a plantation and now a white elephant. The village's murder rate was high enough that Delaney could earn a steady living as a private investigator.

A GIFT OF BONES (2018) was decking the halls time for Sarah Delaney. She was busy Christmas shopping and courting her latest boyfriend, the local Deppity Dawg. She was hired by Cece Dee Falcon, who had received a ransom note from a kidnapper claiming to have her cousin Eve Falcon hostage.

In between shopping for presents and reminiscing about Christmas dinners past, Delaney and friends uncovered more details about the increasingly suspicious kidnapping. Everyone involved seemed related by blood, marriage, or adoption, with many Falcon family secrets to hide.

Thrown into the plot to complicate it were genetic disorders, not too surprising down there, and liver transplants. After the denouement there was a bit of comic relief at the church's Nativity play, which went agley when the woman

acting as Mary decided to ad lib. The final paragraph surprised me to no end, as on Christmas morning it snowed. Snow in Mississippi? I learned something.

Anthologies.

CANDY CANE MURDER (2007) was an anthology of three novellas, no editor credited. The lead-off story was "Candy Cane Murder" by Joanne Fluke, set in her series about Hannah Swensen of Lake Eden, Minnesota. Even among Miss Marples, she was notorious for the murders around her. She owned a bakery and left a trail of corpses behind her.

Wayne Bergstrom, department store owner, was playing Santa Claus at a children's Christmas party. Someone didn't like Santa, whose body was found in a snow bank with a trail of candy canes behind him. Recipes were interspersed through the chapters, starting with Peppermint Martinis. Drink a few of those and you'll definitely be ho-ho-ho-ing.

Swensen did some snooping in between her baking. The dead man's family had a complicated genealogy, which the murderer tried to simplify so she could inherit sooner rather than later. The Candy Cane Bar Cookies recipe wrapped up the story.

The next story was "The Dangers Of Candy Canes" by Laura Levine. It was part of a series about Jaine (with an 'i') Austen, a freelance writer and Miss Marple in southern California. She was asked to help when wealthy suburbanite Garth Janken fell off his house while putting up a giant candy cane. The entire neighbourhood was very competitive about their Christmas displays. The murderer might have been one of them but the more prosaic explanation was a psychotic wife.

"Candy Canes Of Christmas Past" by Leslie Meier was set in one of those Maine fishing villages with a murder rate which one expects of Jessica Fletcher. Lucy Stone was the resident Miss Marple, or Jessica Fletcher if you prefer, of Tinker's Cove.

Stone investigated the death of a woman who fell down the basement stairs on Christmas Eve. Did she fall or was she pushed? In keeping with the season, a crushed glass candy cane was found under her body. It was a darker story than usual, as Stone was having trouble with her husband and was thinking of moving out.

The murder brought out some unsuspected history about a nurse whose patients seemed to have a higher than normal mortality rate. She got annoyed when her charges didn't shuffle off this Earth sooner.

CHRISTMAS COCOA MURDER (2019) was an anthology of three novellas, no editor credited. The lead-off story was "Christmas Cocoa Murder" by Carlene O'Connor (pseudonym of Mary Carter) which was set in the village of Kilbane, Ireland. Siobhan O'Sullivan had just graduated from police academy in Dublin. She was enjoying Christmas at home before reporting for duty in the new year.

The village festival included a Santa Claus dunk tank filled with hot cocoa. One marvels at the amount of cocoa powder wasted on such an amusement, not to mention the trouble in heating that much water. The jolly old man was played by Paddy O'Shea, a little too jolly from drink.

Someone silenced his ho-ho-ho-ing by cutting his throat and leaving him face down in the cocoa. O'Sullivan investigated as a semi-official member of the Garda. The culprit was a thief whose loot had been stolen by O'Shea.

"Christmas Cocoa And A Corpse" by Maddie Day (pseudonym of Edith Maxwell) was about Robbie Jordan, the Miss Marple of South Link, Indiana. She operated the Pans 'N Pancakes country store and restaurant. Local businessman Jed Greenberg, a sharp-practice man, was found dead, with a chocolate labrador dog standing over his body.

It might have been poisoned cocoa or pancakes, so Jordan had to defend her restaurant by Marpleing. The details she unearthed were not pleasant. Greenberg was an embezzler and a wife beater. His wife Willa Mae could no longer take him and finished him off. After the case was closed, Jordan was at home enjoying hot cocoa and cookies with her family, trying not to think of Willa Mae sitting alone in a jail cell.

"Death By Hot Cocoa" by Alex Erickson (pseudonym of Eric S. Moore) was about bookstore café owner Krissy Hancock of Pine Hills, Ohio. She was attending a Christmas party at an escape room warehouse. The host was Lewis Coates, a boor and a control freak but hardly a reason for someone killing him. He was found face down in a puddle of cocoa drink.

Hancock had Marpleing experience but the clues seemed to point to different people. Finally she figured out the killer was one of the escape room contestants. He had been embezzling from the bank he worked at. Coates was auditing the computer system and was likely to expose the thief.

CHRISTMAS SWEETS (2019) was another 3-novella anthology, no editor credit as usual. The first story was "The Twelve Desserts Of Christmas" by Joanne Fluke, which I reviewed in OPUNTIA #457.

The second story was "Nightmare On Elf Street" by Laura Levine. The protagonist was once more Jaine Austen, who was working a gig as an elf for a shopping mall Santa Claus. The mall manager was short an elf and made it clear that if Austen wanted to be hired for copywriting advertisements, she had to work first as an elf.

The Santa Claus she was assigned was Scotty, a nasty fellow who went through elves at a rapid pace because of his boorish behaviour, womanizing, and alcoholism. What really annoyed Austen was that she had trouble squeezing into her elf's costume. After doing so, she learned the previous wearer was a man who quit to concentrate on his weight loss programme.

The second shift Santa was Barnaby, a much nicer fellow. He was an English Literature major whose degree barely qualified him for such a job. He quoted Shakespeare at the drop of a hat. In addition, he operated the Tiny Tim Toys project, which collected cash and toys for poor children.

Scotty was involuntarily sent to the graveyard. There were a plethora of suspects, including Austen, so she had to Marple in self-defence. Barnaby was discovered to be the murderer. His project was a fraud, for he kept the cash and sold the toys online. Scotty found out and wanted a piece of the action, aka blackmail. Barnaby decided otherwise.

The third story was "The Christmas Thief" by Leslie Meier, another installment of the Lucy Stone saga. Pity was taken on Tinker's Cove, so the story was placed elsewhere. Lucy's daughter Elizabeth was working at the Cavendish Hotel in Palm Beach, so Lucy went down to Florida.

Elizabeth was assisting at a Yule charity ball when the sponsor's gems were stolen. The hotel management needed lessons in employee relations and the guests needed lessons in good manners. Mom did the sleuthing by force of habit. The thieves were exposed, their leader being an event organizer bound for the jail cell. Felice Navidad.

Gimme That Old-Time Radio.

Do I need to introduce The Shadow? No? So on to "The Stockings Were Hung", first aired on Christmas Eve 1939 in THE SHADOW series. The plot owed much to Charles Dickens. The story began with the widower Kingsley Grover, with two children Spike and Jean to support, trying to get money from skinflint Simon Jordan.

Lamont Cranston and Margo Lane were taking Christmas food baskets to the needy. They passed a newsboy who was substituting for Spike. When they wondered why he was missing, the newsboy Gabby said it was a confidential family matter.

Without missing a breath, he then went into great detail about Spike and Jean, motherless children, and their family woes. Their grandfather had lost the family business to Jordan by sharp practice, who then fired Kingsley just before Christmas.

Once the infodump was concluded, Cranston got the Grover address from Gabby and hired a cab for the evening, driven by Louie. (In old-time radio, all cab drivers were named Louie.) Lane went off to deliver baskets.

En route to the Grovers, Cranston stopped off at a pet store to buy a puppy for $35 as a Christmas gift for Lane. In 1939, $35 was big money; call it $350 in today's depreciated currency. He certainly was a wealthy young man about town. For that price it should have been a purebred with registration papers.

Jump cut to a scene of pathos with Jean trying to bake cookies with her late mother's recipe. The larder was bare and she had no ingredients. Cranston arrived to find her weeping. After drying her tears, she told him Spike was out looking for their father, who hadn't come home and was now missing two days.

Cranston gave Jean $5 to buy food and went out searching for her father with Lane. An endless parade of tearjerking scenes followed. Jordan had faked the company books to implicate Kingsley in a fraud. The Shadow paid a visit to Jordan and did a Ghost of Christmas speech to frighten him.

It all ended well as one might expect. "*Merry Christmas to you all, and to all a good night*", said Cranston. I suspect that line wasn't original.

Televised Christmas.

THE MAN FROM UNCLE aired on television from 1964 to 1968 for 3.5 seasons, having been canceled halfway through its fourth season. It was a spy action-adventure series designed to capitalize on the success of the James Bond movies. Available as a boxed DVD set.

The two main characters were Napoleon Solo and Ilya Kuryakin, UNCLE agents who worked out of the New York City offices. See OPUNTIAs #361 to 364, and 462 for a more detailed look at the series.

"The Jingle Bells Affair" was written by William Fay and aired in 1966 two days before Christmas. It was a parody of Soviet Premier Khrushchev's visit to America a few years earlier. Those of us old enough to remember the Cold War will be more amused by the humour in this episode, although Millennials will miss most of the topical references.

Chairman Georgi Koz was visiting New York City in the interests of peaceful coexistence. Solo and Kuryakin were assigned as bodyguards but they were mostly babysitters. Like Khrushchev, Koz was an ill-mannered boor. He visited Macy's, the capitalist exploiter of the masses, then a school for Santa Clauses.

Koz's aide was a security chief named Radish. Half the cast pronounced his name like the vegetable and the others as 'ray-dish'. Radish was an ideological puritan who did not approve of Koz promoting peaceful co-existence, or, for that matter, dressing up like Santa Claus. He decided to create incidents to embarrass UNCLE and the American government, to culminate in a car bomb killing Koz.

Oblivious to the conspiracy, Koz visited the Santa school to show the capitalists the proper method of portraying the jolly old gent. Radish staged another assassination attempt at the school. Koz, dressed in a Santa suit, fled over the rooftops. Solo and Kuryakin, once clear of the shooting, had trouble locating Koz in a city where every other street corner had a Santa Claus.

Assorted alarums and excursions spread over Manhattan, as they so often do, but these involved Santas and Soviet agents. All ended well, and Radish was sent off to a re-education camp. Before leaving America, Koz had one final portrayal as a Santa at a children's hospital. Merry Christmas, comrade.

Seen in Calgary. The greyness is not the camera's fault. Some people cover their licence plate in the delusion they can avoid photo radar. Police can pull over such cars because it is illegal to cover a licence plate with anything, transparent or not.

WINTER WONDERLANDS: PART 4
by Dale Speirs

[Parts 1 to 3 appeared in OPUNTIAs #405, 437, and 465.]

Snow Globes.

SNOWMAGEDDON was a 2011 movie which I have as part of a boxed DVD set called "Disaster 4-Movie Collection", issued by Anchor Bay Entertainment. The movie was set in the village of Normal, Alaska, just before Christmas. The Miller family were the main protagonists.

A snow globe appeared on their doorstep one morning, its origin never explained. Rudy, the young son of the Millers, was given the globe. Inside it was a depiction of the village and an adjacent dormant volcano. There was clockwork in the base, and when Rudy wound it up, the events of the movie began happening.

Inside the globe, cracks appeared on the village's street. Outside in the real village, an earthquake occurred and opened up fissures in the street. From there, once an hour, a fresh disaster happened, always foreshadowed by the snow globe. The population of the village steadily declined by about two or three extras or supporting characters with each disaster. The Millers received cuts and bruises but survived to the end credits.

Turbulent clouds appeared and fired ice missiles at the citizenry, spearing a few of them. A rather unusual one was a plague of stalagmites suddenly spearing up from the ground and impaling a few extras, although the supporting and lead actors managed to evade them. The avalanche and firestorms seemed almost mundane by comparison.

After much to-ing and fro-ing, the villagers figured out the snow globe was to blame. One of them tried to destroy it with a baseball bat but the globe was unscathed and indestructible. Another villager remembered the legend of Pandora's box and how it was finally destroyed by tossing it into a volcano.

Right on cue, the dormant volcano next to the village came back to life. It spouted gasoline fire flames along its flanks, the SFX budget apparently running low by this time. Most of the SFX, by the way, were reasonable for a television movie such as this.

The hero, the head Miller, drove a Sno-Cat up the volcano and tossed the snow globe into the lava. Suddenly the volcano went dormant, and the villagers had peace and quiet in which to rebuild and celebrate Christmas. Hugs all around and the orchestra was cued for the end credits.

Other than failing to explain the origin of the snow globe, the movie wasn't that bad as a B-grade television movie. Although set in Alaska, Canadian viewers such as myself will recognize several actors as Canucks well known here but unknown in the USA. Canadians should look for Lorne Cardinal as one of the main supporting actors who survived all the way to the end of the movie.

My neighbour's snow globes.

Sleigh Bells, Not Necessarily Jingling.

THE ZERO HOUR was aired on radio in 1973 and 1974 as an anthology series, with Rod Serling as the host. Think of his television series as if they were done on radio. He did the intro and outro for each episode but the series was produced by Elliott Lewis. It is available as free mp3s from the Old Time Radio Researchers at www.otrrlibrary.org The episodes were a mixture of science fiction, fantasy, and mystery.

"The Corpse Takes A Sleigh Ride" was written by Glenhall Taylor and aired on 1974-07-08. Strangely it was broadcast during the height of the summer despite being set at a ski resort in winter.

Jim Stanley was a Los Angeles lawyer on vacation up in the mountains. He took a one-horse sleigh for a ride with his girlfriend Elsa Morgan. The mare brought him back alone. He had been seen arguing with her and was now dead from a bullet. The sheriff was summoned and the plot proceeded.

Elsa was believed to have gone back to her home in Hollywood. Others in the skiing party were Robert Edmonds and his wife Sally, and Charles Dixon, who spent most of his time drunk. Stanley had a contractor named Burnette working on his cabin, whom he fired. They were all suspects for one reason or another.

The sheriff went over to Burnette's cabin but he wasn't there. Morgan was, shot dead. Assorted alarums followed around the mountain. Burnette turned himself in to the sheriff but proclaimed his innocence with a long convoluted story.

With only four minutes left, the episode made a giant leap to a J'accuse! meeting hosted by the sheriff. Additional giant leaps followed. Morgan was a call girl. Edmonds was trying to blackmail Stanley, who hadn't known Morgan was a prostitute. The gun that killed her and Stanley was registered to Edmonds, who immediately claimed he had lost it. Nice try, but it didn't work.

Many Are Cold But Few Are Frozen.

FROZEN ALIVE was a 1964 Anglo-German black-and-white movie, written by Evelyn Frazer. It was a cut above the regular B-movies of that era and well played. My copy is on the 50-movie DVD boxed set "Mad Scientist Theatre" from Mill Creek Entertainment.

The soundtrack had some problems, with jazz music completely inappropriate to quieter scenes. The sound man over-miked the scenes, making the characters sound as if everyone was wearing tap shoes. Setting aside those complaints, the movie as a whole grew on me and was worth watching.

The setting was the World Health Organization, Low Temperate Unit, Berlin Division. Researchers had frozen a chimpanzee at -80°C, then successfully revived it. That accomplishment was quickly buried under a variety of romantic entanglements and political maneuvering.

The lead scientist was Dr Frank Overton, assisted by Dr Helen Wieland. (The actress who played her soon retired from acting and became a real medical doctor.) Overton's wife Joan was an alcoholic. If he neglected her and worked many long hours in the laboratory, it was because his home life was so unhappy. She was having an affair with Tony Stein. Meanwhile, Wieland's love for Frank was unrequited as he was oblivious to her mooning over him.

The laboratory's senior scientists generally acted as confidants to those in the love triangles. They spent much of their time running interference with the political masters, for the implications of freezing and revival did not go unnoticed in the high command. Everyone was aware that the next obvious step in the project was to freeze a human.

Frank wanted to be the first test subject. Wieland objected but reluctantly acquiesced. The senior scientist could not authorize such a thing but wisely remarked that it was easier to ask forgiveness than permission, and made a visible show of stepping out for a meeting. Frank was frozen.

As he became a corpsicle, Joan was at Stein's house. She found his handgun and while dramatically waving it about, accidently shot herself dead. He panicked, moved her body elsewhere to be found, and made himself scarce. No one else knew about their affair. Since the Overtons had many public fights, the police latched on to Frank as the culprit and thought he was using his experiment as an alibi.

Upon arriving at the laboratory, the police settled in to wait out the experiment. The procedure was a success, and Wieland began reviving him. As he regained consciousness, she overheard the police talking about Joan's death at the hands of Frank. Thinking he was a murderer, she sabotaged the revival and he flatlined.

A moment later an officer burst into the laboratory and told the inspector that Stein had just contacted the police and told them Joan's death was accidental. The shock to Wieland was palpable. She began emergency resuscitation and by the thinnest of margins brought Frank back to life. A happy ending, and in the epilogue they were married.

THEATER FIVE was a short-lived attempt at reviving drama shows on radio. It aired for the 1964-65 season but the war against television was lost a decade prior so it failed. The episodes were generally well written and produced, and

are worth downloading from www.otrrlibrary.org. The episodes were a mixture of science fiction, fantasy, murder, and sometimes just plain drama.

"The Big Freeze" was a 1964 episode, written by Saul Panitz. Joe Carter had been diagnosed with terminal heart disease. His doctor was working on artificial hibernation and cryogenics, so Carter volunteered for the experiment.

Carter's wife Dottie said she would wait for him. Carter settled up with his business partner Rico by sticking a knife into him. That gave Joe full ownership of the business, so Dottie could inherit. Two years later, he was revived.

The doctor told him that Rico had also been frozen and revived a few days earlier. He had been found murdered by an unknown assailant and his body used for the experiment. Dottie had died in an accident a few days after Joe had been frozen. She was buried in the usual manner. The doctor said Rico was very enthusiastic about wanting to meet Joe again.

"Cold Storage" was written by William Morn and aired on 1965-02-08. A group of people had the dubious honour of being frozen alive for a thousand years, whether or not they wanted the procedure. They were locked into a small room where a man, describing himself as a Judas goat, explained the situation. Or didn't rather, leaving them to squabble about what might happen.

Their host excused himself and left the room. The group figured out they were going to be frozen into the future, rather than sent ahead by a time machine. Their fear was they couldn't come back. They'd never know what happened to their loved ones and friends. Much agonizing at great length.

When the host returned, they took him prisoner to force some answers. He said the freezing would be near instantaneous without warning in that very room. Everyone began arguing at the top of their lungs. The babble suddenly cut off. Finis.

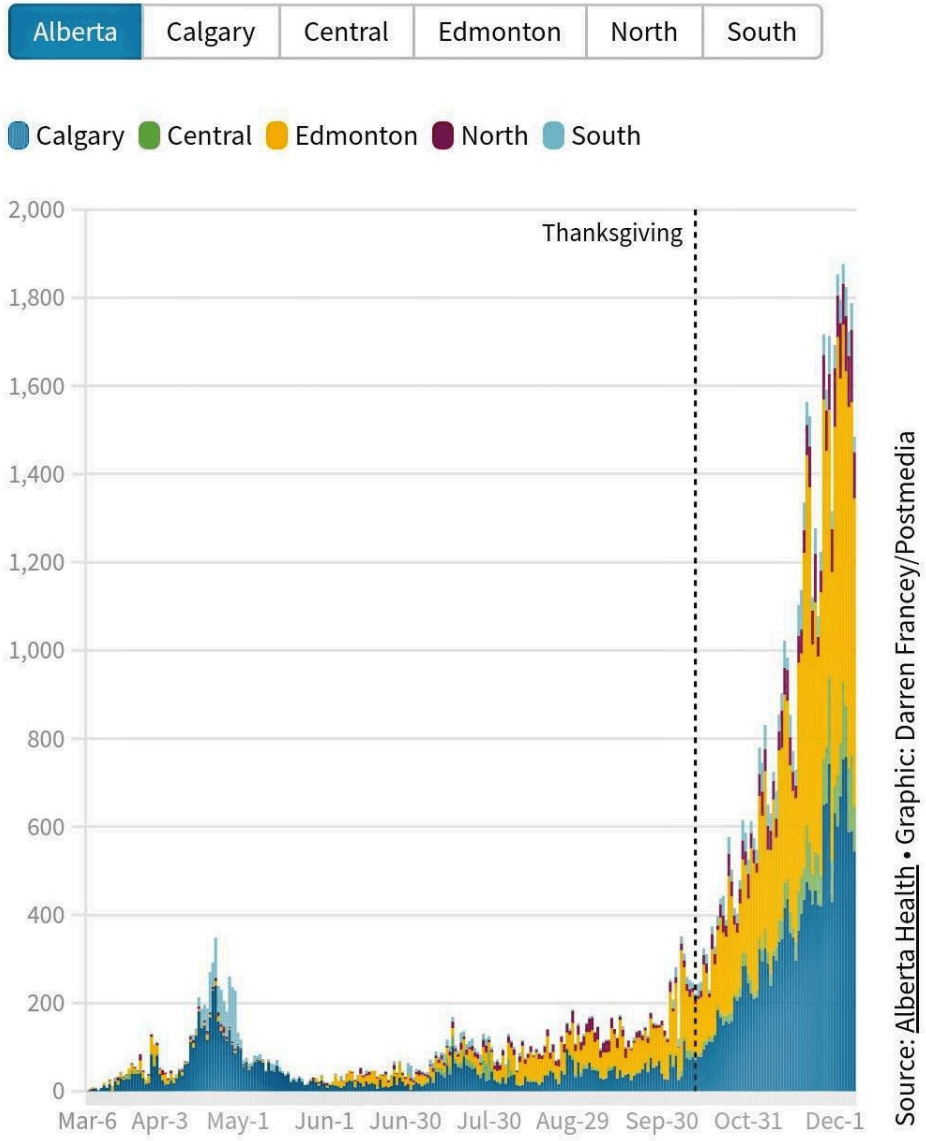
A typical avant garde type ending, with no resolution. A few years hence, the New Wave fad of science fiction would start up, with much the same sort of writing. This episode was more a vignette than a story.

CURRENT EVENTS: PART 9

by Dale Speirs

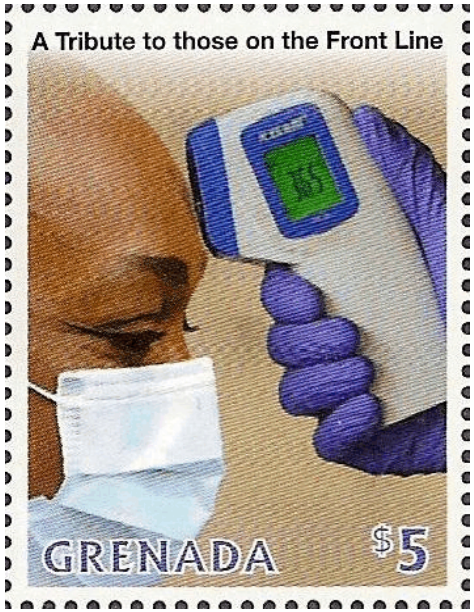
[Parts 1 to 8 appeared in OPUNTIAs #474, 475, 479, 480, 483, 484, 488, and 489.]

The chart below says it all. Alberta COVID-19 cases began to tick up in late September after schools re-opened. What really energized the second wave were all those Thanksgiving dinners where extended families got together, triggering countless superspreader cases in late October. Halloween parties amplified the trend. Alberta is now under a second lockdown, and all gatherings, public and family, are prohibited. Too late.



My COVID-19 stamp collection continues to expand. A very popular topical for philatelists.

Here are some stamps from the second batch I bought. (Not to same scales.) See OPUNTIA #488 for the first batch.



My neighbour's boulevard tree with her latest yarnbombing additions.

The BOO! strip was Halloween week.

Seen along the Bow River Promenade. Not a Canada goose in sight though.

Alberta is into a second lockdown that will last until January 12. If the first lockdown didn't break the small merchants, then the second one at the height of the Christmas shopping season will undoubtedly finish off most of the remaining retail brick-and-mortar establishments.

As of December 20, the Canadian casualty rate from COVID-19 was 507,794 active cases, 416,697 recovered cases, and 14,226 deaths. Canada's population is 38,000,000.

SEEN IN THE LITERATURE

Zic, A., et al (2020) **A flare-type IV burst event from Proxima Centauri and implications for space weather.** ASTROPHYSICAL JOURNAL 905(1):23

Authors' abstract: *Studies of solar radio bursts play an important role in understanding the dynamics and acceleration processes behind solar space weather events, and the influence of solar magnetic activity on solar system planets. Similar low-frequency bursts detected from active M-dwarfs are expected to probe their space weather environments and therefore the habitability of their planetary companions.*

Active M-dwarfs produce frequent, powerful flares which, along with radio emission, reveal conditions within their atmospheres. However, to date, only one candidate solar-like coherent radio burst has been identified from these stars, preventing robust observational constraints on their space weather environment.

During simultaneous optical and radio monitoring of the nearby dM5.5e star Proxima Centauri, we detected a bright, long-duration optical flare, accompanied by a series of intense, coherent radio bursts. These detections include the first example of an interferometrically detected coherent stellar radio burst temporally coincident with a flare, strongly indicating a causal relationship between these transient events.

The polarization and temporal structure of the trailing long-duration burst enable us to identify it as a type IV burst. This represents the most compelling detection of a solar-like radio burst from another star to date.

Solar type IV bursts are strongly associated with space weather events such as coronal mass ejections and solar energetic particle events, suggesting that stellar type IV bursts may be used as a tracer of stellar coronal mass ejections. We discuss the implications of this event for the occurrence of coronal mass ejections from Proxima Cen and other active M-dwarfs.

Speirs: Which basically means that alas, not only is there no probability of life in the star nearest to the Solar System, but it would be unhabitable for Earth colonies because of the frequent flares.

Konstantinov, K.K., and A.F. Konstantinova (2020) **Chiral symmetry breaking in large peptide systems.** ORIGINS OF LIFE AND EVOLUTION OF BIOSPHERES 50:99-120 (available as a free pdf)

[Large molecules such as sugars and amino acids often have two forms despite their identical chemical bonds and atoms, known as enantiomers. One form twists the molecule to the left (L) and the other twists it to the right (D), both called chiralty.]

[Theoretically a given molecule should be half L form and half D form. However, in cellular biology for some unknown reason, amino acids are L enantiomers and sugars are D enantiomers. Speculation is that when life was originating on Earth billions of years ago, the conditions favoured those two forms, but why this was so is unknown.]

Authors' abstract: *The problem of chiral symmetry breaking in live matter, or why life forms use only L enantiomers of amino acids and D enantiomers of sugars has been the subject of great scientific interest and extensive research since the discovery of enantiomers by Louis Pasteur more than 150 year ago.*

Chiral symmetry breaking in far from equilibrium systems with large number of amino acids and peptides, like a prebiotic Earth, was considered. It was shown that if organic catalysts were abundant, then effective averaging of enantioselectivity would prohibit any symmetry breaking in such systems.

It was further argued that non-linear (catalytic) reactions must be very scarce (called the abundance parameter) and catalysts should work on small groups of similar reactions (called the similarity parameter) in order to chiral symmetry breaking have a chance to occur.

Models with 20 amino acids and peptide lengths up to three were considered. It was shown that there are preferred ranges of abundance and similarity parameters where the symmetry breaking can occur in the models with catalytic synthesis / catalytic destruction / both catalytic synthesis and catalytic destruction.

It was further shown that models with catalytic synthesis and catalytic destruction statistically result in a substantially higher percentage of the models where the symmetry breaking can occur in comparison to the models with just catalytic synthesis or catalytic destruction.

It was also shown that when chiral symmetry breaking occurs, then concentrations of some amino acids, which collectively have some mutually beneficial properties, go up, whereas the concentrations of the ones, which don't have such properties, go down.

Strathmann, R.R. (2020) **Multiple origins of feeding head larvae by the Early Cambrian.** CANADIAN JOURNAL OF ZOOLOGY 98:doi.org/10.1139/cjz-2019-0284

[The Cambrian era was 542.0 to 488.3 megayears ago, just after multicellular animals evolved and during which there was a massive surge in speciation.]

Author's abstract: *In many animals the head develops early, most of the body axis later. A larva composed mostly of the developing front end therefore can attain mobility and feeding earlier in development.*

Fossils, functional morphology, and inferred homologies indicate that feeding head larvae existed by the Early Cambrian in members of three major clades of animals: ecdysozoans, lophotrochozoans, and deuterostomes.

Some of these early larval feeding mechanisms were also those of juveniles and adults (the lophophore of brachiopod larvae and possibly the ciliary band of the dipleurula of hemichordates and echinoderms); some were derived from structures that previously had other functions (appendages of the nauplius).

Trochophores that swim with a preoral band of cilia, the prototroch, originated before divergence of annelids and molluscs, but evidence of larval growth and thus a prototrochal role in feeding is lacking for molluscs until the Ordovician.

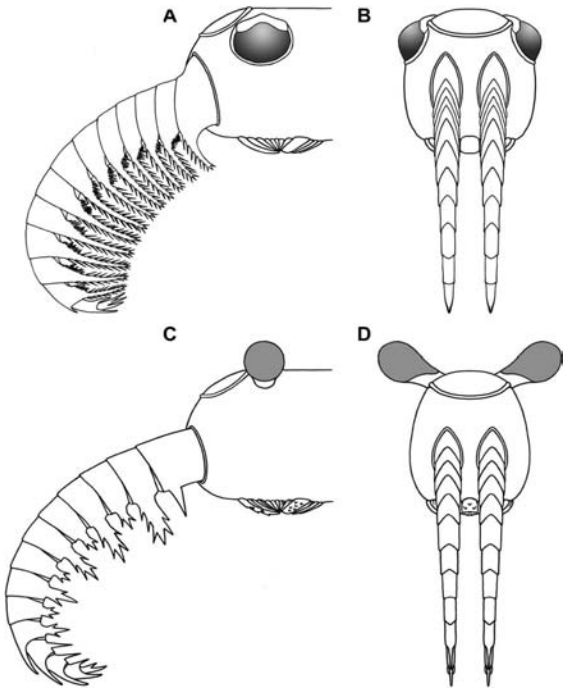
Feeding larvae that definitely originated much later, as in insects, teleost fish, and amphibians, develop all or nearly all of what will become the adult body axis before they begin feeding. On present evidence, head larvae, including feeding head larvae, evolved multiple times early in the evolution of bilaterian animals and never since.

Paterson, J.R., et al (2020) **Disparate compound eyes of Cambrian radiodonts reveal their developmental growth mode and diverse visual ecology.** SCIENCE ADVANCES 6:doi.org/10.1126/sciadv.abc6721 (available as a free pdf)

Authors' abstract: *Radiodonts are nektonic stem-group euarthropods that played various trophic roles in Paleozoic marine ecosystems, but information on their vision is limited. Optical details exist only in one species from the Cambrian Emu Bay Shale of Australia, here assigned to Anomalocaris aff. canadensis.*

We identify another type of radiodont compound eye from this deposit, belonging to 'Anomalocaris' briggsi. This about 4-cm sessile eye has >13,000 lenses and a dorsally oriented acute zone. In both taxa, lenses were added marginally and increased in size and number throughout development, as in many crown-group euarthropods.

Both species' eyes conform to their inferred lifestyles. The macrophagous predator A. aff. canadensis has acute stalked eyes (>24,000 lenses each) adapted for hunting in well-lit waters, whereas the suspension-feeding 'A.' briggsi could detect plankton in dim down-welling light. Radiodont eyes further demonstrate the group's anatomical and ecological diversity and reinforce the crucial role of vision in early animal ecosystems.



[Images are from this paper. A and B are '*Anomalocaris*' *briggsi*, C and D are *Anomalocaris* aff. *canadensis*. For scale, their eyes are about 4 cm in diameter.]

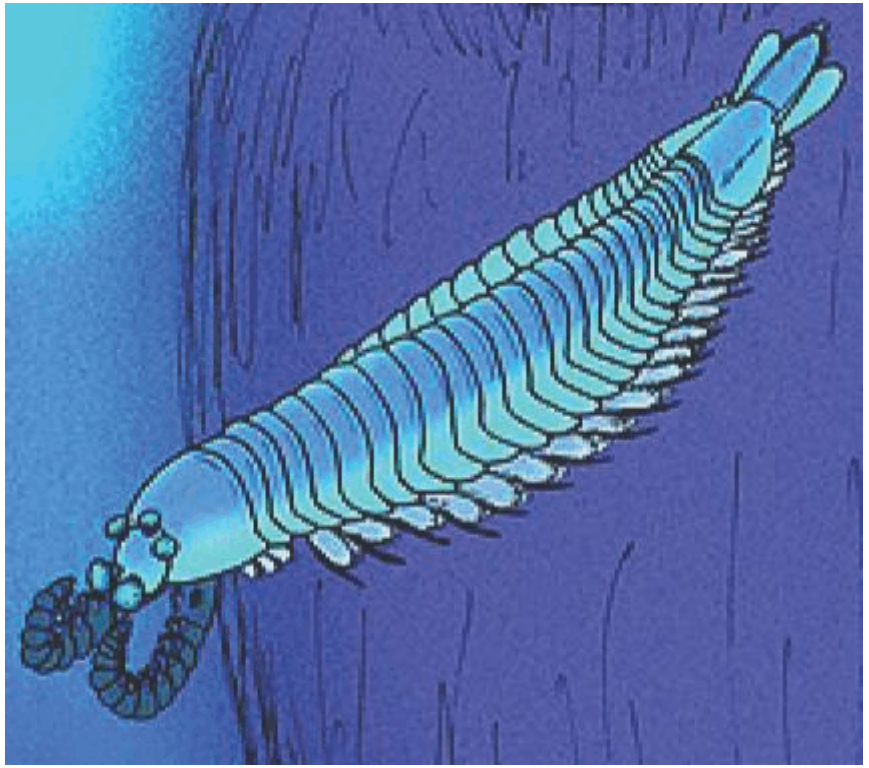
Zeng, H., et al (2020) **An early Cambrian euarthropod with radiodont-like raptorial appendages.** NATURE 588:101-105

Authors' abstract: *Resolving the early evolution of euarthropods is one of the most challenging problems in metazoan evolution. Exceptionally preserved fossils from the Cambrian period have contributed important palaeontological data to deciphering this evolutionary process.*

Phylogenetic studies have resolved Radiodonta (also known as anomalocaridids) as the closest group to all euarthropods that have frontal-most appendages on the second head segment (Deuteropoda).

However, the interrelationships among major Cambrian euarthropod groups remain disputed, which impedes our understanding of the evolutionary gap between Radiodonta and Deuteropoda.

Here we describe Kylinxia zhangi gen. et. sp. nov., a euarthropod from the early Cambrian Chengjiang biota of China. Kylinxia possesses not only deuteropod characteristics such as a fused head shield, a fully arthrodized trunk and jointed endopodites, but also five eyes (as in Opabinia) as well as radiodont-like raptorial frontal-most appendages.



Our phylogenetic reconstruction recovers Kylinxia as a transitional taxon that bridges Radiodonta and Deuteropoda. The most basal deuteropods are retrieved as a paraphyletic lineage that features plesiomorphic raptorial frontalmost appendages and includes Kylinxia, megacheirans, panchelicerates, 'great-appendage' bivalved euarthropods and isoxyids.

This phylogenetic topology supports the idea that the radiodont and megacheiran frontalmost appendages are homologous, that the chelicerae of Chelicerata originated from megacheiran great appendages and that the sensorial antennae in Mandibulata derived from ancestral raptorial forms.

Kylinxia thus provides important insights into the phylogenetic relationships among early euarthropods, the evolutionary transformations and disparity of frontalmost appendages, and the origin of crucial evolutionary innovations in this clade.

[Image of Kylinxia zhangi is from Wikipedia.]

Szewczyk, L., et al (2020) **Tracking dinosaurs in coarse-grained sediments from the Upper Triassic of Ardèche (Southeastern France).** PALAIOS 35:447-460

Authors' abstract: *Coarse-grained sediments deposited in high-energy environments are usually considered unfavorable to the preservation of fossil tracks.*

Here we report dinosaur footprints showing good physical preservation, despite being found in coarse-grained sandstones of alluvial origin from the Upper Triassic of Ardèche, southeastern France.

The ichnoassemblage, dominated by Grallator isp., raises questions about the processes leading to the formation and preservation of tracks in coarse-grained sediments. The track-bearing surface is a medium- to coarse-grained quartz arenite that is microconglomeratic locally.

The tracking surface grain size ranges from 0.2 to 2 mm and numerous pebbles are present. It is overlain by a succession of thin, intercalated layers of claystones and siltstones, themselves covered by a mix of siltstones and coarse-grained sandstones.

We interpret this succession as a progressive decrease in energy due to channel migration culminating in channel abandonment, and the establishment of a lower energy setting where the tracking surface formed. Sedimentological and taphonomic observations indicate that the trackmakers walked on fine grained layers (clay, silt) in which true tracks formed.

The passage of the animals along the tracking surface deformed the older coarse-grained sand layers and resulted in the formation of the transmitted undertracks. The fine-grained layer helped record the pedal anatomy of the trackmakers and contributed to protecting the transmitted undertracks from destruction.

Overall, we suggest that the fossil footprints were preserved by abiotic processes only, the main factor being the lithological contrast between successive sedimentary layers. The exceptional preservation of those relatively high quality undertracks in coarse-grained deposits contrasts sharply with the prevailing models of true track formation involving fine-grained sediments and microbial mats present in low-energy environments.

This mode of undertrack formation may have been relatively frequent elsewhere but potentially overlooked in previous studies.

Gatesy, S.M., and P.L. Falkingham (2020) **Hitchcock's Leptodactyli, Penetrative tracks, and dinosaur footprint diversity.** JOURNAL OF VERTEBRATE PALEONTOLOGY 40:doi.org/10.1080/02724634.2020.1781142

Authors' abstract: *Starting with his first report on fossil footprints from the Connecticut Valley over 180 years ago, Edward Hitchcock described what he interpreted as a burgeoning ancient fauna founded on ever increasing nominal track diversity. For three decades, Hitchcock made countless contributions to ichnology, but his inference of thin-toed animals (Leptodactyli) from thin-toed tracks is flawed by modern criteria.*

Leptodactylous tracks are now recognized as variants made by thick-toed feet penetrating into soft, collapsing substrates. Herein, we take a closer look at the creation of such penetrative tracks using computer simulations of particle flow. Classic specimens are used to demonstrate how different modes of surface presentation make penetrative tracks challenging to recognize and interpret.

Evaluation of 266 specimens from 43 leptodactylous ichnotaxa reveals that ~90% are penetrative. We propose that a reliance on a single formation mechanism confounded Hitchcock's ability to reliably recognize different trackmakers.

This is not an old problem applicable only to fossils collected long ago. Domination of a transmission-based model continues to bias the field today. Most texts and many publications either omit collapsed penetrative tracks or fail to recognize them as a significant source of variation.

Without proper regard for subsurface toe movement and sediment flow, inferences of foot shape from track shape can, as for Hitchcock, be led far astray. The misidentification and misunderstanding of penetrative tracks impact our conception of the diversity of life in the Early Jurassic, as well as in other ichnofaunas worldwide.

Mayr, G., and J.H. Hurum (2020) **A tiny, long-legged raptor from the early Oligocene of Poland may be the earliest bird-eating diurnal bird of prey**. THE SCIENCE OF NATURE 107:doi.org/10.1007/s00114-020-01703-z (available as a free pdf)

Authors' abstract: *We report a small hawk-like diurnal bird from the early Oligocene (30 to 31 million years ago) of Poland. Aviraptor longicrus, n. gen. et sp. is of a size comparable with the smallest extant Accipitridae.*

The new species is characterized by very long legs, which, together with the small size, suggest an avivorous (bird-eating) feeding behavior. Overall, the new species resembles extant sparrowhawks (Accipiter spp.) in the length proportions of the major limb bones, even though some features indicate that it convergently acquired an Accipiter-like morphology.

Most specialized avivores amongst extant accipitrids belong to the taxon Accipiter and predominantly predate small forest passerines; the smallest Accipiter species also hunts hummingbirds.

Occurrence of a possibly avivorous raptor in the early Oligocene of Europe is particularly notable because A. longicrus coexisted with the earliest Northern Hemispheric passerines and modern-type hummingbirds.

We therefore hypothesize that the diversification of these birds towards the early Oligocene may have triggered the evolution of small-sized avivorous raptors, and the new fossil may exemplify one of the earliest examples of avian predator/prey coevolution.

Sayol, F., et al (2020) **Anthropogenic extinctions conceal widespread evolution of flightlessness in birds.** SCIENCE ADVANCES 6:doi.org/10.1126/sciadv.abb6095 (available as a free pdf)

Authors' abstract: *Human-driven extinctions can affect our understanding of evolution, through the nonrandom loss of certain types of species. Here, we explore how knowledge of a major evolutionary transition, the evolution of flightlessness in birds, is biased by anthropogenic extinctions.*

Adding data on 581 known anthropogenic extinctions to the extant global avifauna increases the number of species by 5%, but quadruples the number of flightless species. The evolution of flightlessness in birds is a widespread phenomenon, occurring in more than half of bird orders and evolving independently at least 150 times.

Thus, we estimate that this evolutionary transition occurred at a rate four times higher than it would appear based solely on extant species. Our analysis of preanthropogenic avian diversity shows how anthropogenic effects can conceal the frequency of major evolutionary transitions in life forms and highlights the fact that macroevolutionary studies with only small amounts of missing data can still be highly biased.

Flightlessness was far more phylogenetically and geographically widespread before human impacts. It was common in many of the island archipelagos, with remarkable hotspots in Hawaii (23 species) and New Zealand (26 species), including giant flightless geese and moa, respectively.

Before human impacts, more than half of all bird orders had at least one flightless representative (23 orders out of 39), of which 16 orders still had a living representative before historic extinctions (500 years before the present). In contrast, only nine orders include flightless species today. The evolutionary diversity of flightless forms has thus decreased markedly through time, from being present in 40 different families to just 12 today.

Peris, D., et al (2020) **DNA from resin-embedded organisms: Past, present and future.** PLOS ONE 15:doi.org/10.1371/journal.pone.0239521 (available as a free pdf)

Authors' abstract: *Past claims have been made for fossil DNA recovery from various organisms (bacteria, plants, insects and mammals, including humans) dating back in time from thousands to several million years BP. However, many of these recoveries, especially those described from million-year-old amber (fossil resin), have faced criticism as being the result of modern environmental contamination and for lack of reproducibility.*

Using modern genomic techniques, DNA can be obtained with confidence from a variety of substrates (e.g. bones, teeth, gum, museum specimens and fossil insects) of different ages, albeit always less than one million years BP, and results can also be obtained from much older materials using palaeoproteomics.

Nevertheless, new attempts to determine if ancient DNA (aDNA) is present in insects preserved in 40,000-year old sub-fossilised resin, the precursor of amber, have been unsuccessful or not well documented. Resin-embedded specimens are therefore regarded as unsuitable for genetic studies.

However, we demonstrate here, for the first time, that although a labile molecule, DNA is still present in platypodine beetles (Coleoptera: Curculionidae) embedded in six-year-old and two-year-old resin pieces from Hymenaea verrucosa (Angiospermae: Fabaceae) collected in Madagascar. We describe an optimised method which meets all the requirements and precautions for aDNA experiments for our purpose: to explore the DNA preservation limits in resin.

Our objective is far from starting an uncontrolled search for aDNA in amber as it was in the past, but to start resolving basic aspects from the DNA preservation in resin and search from the most modern samples to the ancient ones, step by step. We conclude that it is therefore possible to study genomics from resin embedded organisms, although the time limits remain to be determined.

Speirs: Alas for the Jurassic movies, no one will be recreating dinosaurs anytime soon. Just as well, given the poor track record in keeping the critters under control.

Yum, S.M., et al (2020) **Fingerprint ridges allow primates to regulate grip.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 117:31665-31673

Authors' abstract: *Why have primates evolved epidermal ridges on the volar regions of the hands and feet and with a much greater density of sweat glands than flat skin, which respond to anxiety rather than act as a thermoregulation mechanism?*

During contact with solid objects, the ridges are important for grip and precision manipulation by regulating moisture levels from either external sources or the sweat pores so that the friction is maximized and catastrophic slip is inhibited.

An understanding of the underlying mechanisms involved has become particularly important with the almost ubiquitous contact of the finger pads with flat screens and recent developments in haptic feedback using ultrasonic vibrations for which the performance is critically related to the friction.

Fingerprints are unique to primates and koalas but what advantages do these features of our hands and feet provide us compared with the smooth pads of carnivorans, e.g., feline or ursine species? It has been argued that the epidermal ridges on finger pads decrease friction when in contact with smooth surfaces, promote interlocking with rough surfaces, channel excess water, prevent blistering, and enhance tactile sensitivity.

Here, we found that they were at the origin of a moisture-regulating mechanism, which ensures an optimal hydration of the keratin layer of the skin for maximizing the friction and reducing the probability of catastrophic slip due to the hydrodynamic formation of a fluid layer. When in contact with impermeable surfaces, the occlusion of the sweat from the pores in the ridges promotes plasticization of the skin, dramatically increasing friction.

Occlusion and external moisture could cause an excess of water that would defeat the natural hydration balance. However, we have demonstrated using femtosecond laser-based polarization-tunable terahertz wave spectroscopic imaging and infrared optical coherence tomography that the moisture regulation may be explained by a combination of a microfluidic capillary evaporation mechanism and a sweat pore blocking mechanism.

This results in maintaining an optimal amount of moisture in the furrows that maximizes the friction irrespective of whether a finger pad is initially wet or dry. Thus, abundant low flow sweat glands and epidermal furrows have provided primates with the evolutionary advantage in dry and wet conditions of manipulative and locomotive abilities not available to other animals.

Lehtimäki, J., et al (2020) **Simultaneous allergic traits in dogs and their owners are associated with living environment, lifestyle and microbial exposures.** SCIENTIFIC REPORTS 10:doi.org/10.1038/s41598-020-79055-x (available as a free pdf)

Authors' abstract: *Both humans and pet dogs are more prone to develop allergies in urban than in rural environments, which has been associated with the differing microbial exposures between areas. However, potential similarities in the microbiota, that associate with environmental exposures, in allergic dogs and owners has not been investigated.*

We evaluated skin and gut microbiota, living environment, and lifestyle in 168 dog-owner pairs. Due to partly different manifestations of allergies between species, we focused on aeroallergen sensitized humans and dogs with owner-reported allergic symptoms.

Our results agree with previous studies: dog-owner pairs suffered simultaneously from these allergic traits, higher risk associated with an urban environment, and the skin, but not gut, microbiota was partly shared by dog-owner pairs.

We further discovered that urban environment homogenized both dog and human skin microbiota. Notably, certain bacterial taxa, which were associated with living environment and lifestyle, were also related with allergic traits, but these taxa differed between dogs and humans.

Thus, we conclude that dogs and humans can be predisposed to allergy in response to same risk factors. However, as shared predisposing or protective bacterial taxa were not discovered, other factors than environmental microbial exposures can mediate the effect or furry dog and furless human skin select different taxa.

Lambert, C., et al (2020) **Striking forest revival at the end of the Roman Period in north-western Europe.** SCIENTIFIC REPORTS 10:doi.org/10.1038/s41598-020-77253-1 (available as a free pdf)

Authors' abstract: *The Holocene period (last 11,700 years before present) has been marked by significant climate variability over decadal to millennial timescales. The underlying mechanisms are still being debated, despite ocean–atmosphere–land connections put forward in many paleo-studies.*

Among the main drivers, involving a cluster of spectral signatures and shaping the climate of north-western Europe, are solar activity, the North Atlantic Oscillation (NAO) varying atmospheric regimes and North Atlantic oceanic gyre dynamics.

Over the last 2500 years BP, paleo-environmental signals have been strongly affected by anthropogenic activities through deforestation and land use for crops, grazing, habitations, or access to resources.

Palynological proxies (especially pollen grains and marine or freshwater microalgae) help to highlight such anthropogenic imprints over natural variability. Palynological analyses conducted in a macro-estuarine sedimentary en

vironment of north-western France over the last 2500 years BP reveal a huge and atypical 300 year-long arboreal increase between 1700 and 1400 years BP (around 250 and 550 years AD) that we refer to as the '1.7–1.4 ka Arboreal Pollen rise event' or '1.7–1.4 ka AP event'.

Interestingly, the climatic 1700 to 1200 years BP interval coincides with evidence for the withdrawal of coastal societies in Brittany (NW France), in an unfavourable socio-economic context.

We suggest that subpolar North Atlantic gyre strengthening and related increasing recurrence of storminess extremes may have affected long-term coastal anthropogenic trajectories resulting in a local collapse of coastal agrarian societies, partly forced by climatic degradation at the end of the Roman Period.

Robinson, D.W., et al (2020) ***Datura* quids at Pinwheel Cave, California, provide unambiguous confirmation of the ingestion of hallucinogens at a rock art site.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 117:31026-31037

[A quid is a piece of a plant that is chewed but not swallowed, such as a tobacco plug or a piece of hallucinogenic plant.]

Authors' abstract: *Proponents of the altered states of consciousness (ASC) model have argued that hallucinogens have influenced the prehistoric making of images in caves and rock shelters. However, the lack of direct evidence for the consumption of hallucinogens at any global rock art site has undermined the ASC model.*

We present the first clear evidence for the ingestion of hallucinogens at a rock art site, in this case, from Pinwheel Cave, California. Quids in the cave ceiling are shown to be Datura wrightii, a Native Californian entheogen, indicating that, rather than illustrating visual phenomena caused by the Datura, the rock paintings instead likely represent the plant and its pollinator, calling into question long-held assumptions about rock art and the ASC model.

While debates have raged over the relationship between trance and rock art, unambiguous evidence of the consumption of hallucinogens has not been reported from any rock art site in the world.

A painting possibly representing the flowers of Datura on the ceiling of a Californian rock art site called Pinwheel Cave was discovered alongside fibrous quids in the same ceiling.

Even though Native Californians are historically documented to have used Datura to enter trance states, little evidence exists to associate it with rock art. A multianalytical approach to the rock art, the quids, and the archaeological context of this site was undertaken.

Liquid chromatography-mass spectrometry results found hallucinogenic alkaloids scopolamine and atropine in the quids, while scanning electron microscope analysis confirms most to be Datura wrightii. Three-dimensional analyses of the quids indicate the quids were likely masticated and thus consumed in the cave under the paintings.

Archaeological evidence and chronological dating shows the site was well utilized as a temporary residence for a range of activities from Late Prehistory through Colonial Periods. This indicates that Datura was ingested in the cave and that the rock painting represents the plant itself, serving to codify communal rituals involving this powerful entheogen. These results confirm the use of hallucinogens at a rock art site while calling into question previous assumptions concerning trance and rock art imagery.

Andreu-Moreno, I., et al (2020) **Cooperative nature of viral replication.** SCIENCE ADVANCES 6:doi.org/10.1126/sciadv.abd4942 (available as a free pdf)

Authors' abstract: *The ability of viruses to infect their hosts depends on rapid dissemination following transmission. The notion that viral particles function as independent propagules has been challenged by recent observations suggesting that viral aggregates show enhanced infectivity and faster spread. However, these observations remain poorly understood.*

Here, we show that viral replication is a cooperative process, such that entry of multiple viral genome copies into the same cell disproportionately increases short-term viral progeny production. This cooperativity arises from the positive feedback established between replication templates and virus-encoded products involved in replication and should be a general feature of viruses.

Rechtman, E., et al (2020) **Vital signs assessed in initial clinical encounters predict COVID-19 mortality in an NYC hospital system.** SCIENTIFIC REPORTS 10:doi.org/10.1038/s41598-020-78392-1 (available as a free pdf)

Authors' abstract: *Timely and effective clinical decision-making for COVID-19 requires rapid identification of risk factors for disease outcomes. Our objective was to identify characteristics available immediately upon first clinical evaluation related COVID-19 mortality.*

We conducted a retrospective study of 8770 laboratory-confirmed cases of SARS-CoV-2 from a network of 53 facilities in New York City. We analysed 3 classes of variables; demographic, clinical, and comorbid factors, in a two-tiered analysis that included traditional regression strategies and machine learning. COVID-19 mortality was 12.7%.

Logistic regression identified older age, male sex, higher BMI, higher heart rate, higher respiratory rate, lower oxygen saturation, and chronic kidney disease were associated with COVID-19 mortality.

Using gradient-boosting machine learning, these factors predicted COVID-19 related mortality following cross-validation in a training set. Immediate, objective and culturally generalizable measures accessible upon clinical presentation are effective predictors of COVID-19 outcome.

Caulkins, J., et al. (2020) **How long should the COVID-19 lockdown continue?** PLOS ONE 15:doi.org/10.1371/journal.pone.0243413 (available as a free pdf)

Authors' abstract and extracts: *The literature on COVID-19 models is exploding almost as fast as the virus itself, and some papers do model the balancing of health and economic interests.*

Nations struggled to decide when and how to end COVID-19 inspired lockdowns, with sharply divergent views between those arguing for a resumption of economic activity and those arguing for continuing the lockdown in some form.

We examine the choice between continuing or ending a full lockdown within a simple optimal control model that encompasses both health and economic outcomes, and pays particular attention to when need for care exceeds hospital capacity.

The model shows that very different strategies can perform similarly well and even both be optimal for the same relative valuation on work and life because of the presence of a so-called Skiba threshold. Qualitatively the alternate strategies correspond to trying essentially to eradicate the virus or merely to flatten the curve so fewer people urgently need health care when hospitals are already filled to capacity.

As might be expected, the optimal duration of the lockdown depends sharply on when it began, but not always in the expected way. Whereas one might have thought that starting too late would require keeping the lockdown in place longer, we find that starting later can sometimes make it optimal to end the lockdown sooner.

Wajnberg, A., et al (2020) **Robust neutralizing antibodies to SARS-CoV-2 infection persist for months.** SCIENCE 370:1227-1230 (available as a free pdf)

Authors' abstract: *Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has caused a global pandemic with millions infected and more than 1 million fatalities. Questions regarding the robustness, functionality, and longevity of the antibody response to the virus remain unanswered.*

Here, on the basis of a dataset of 30,082 individuals screened at Mount Sinai Health System in New York City, we report that the vast majority of infected individuals with mild-to-moderate COVID-19 experience robust immunoglobulin G antibody responses against the viral spike protein.

We also show that titers are relatively stable for at least a period of about 5 months and that anti-spike binding titers significantly correlate with neutralization of authentic SARS-CoV-2. Our data suggest that more than 90% of seroconverters make detectable neutralizing antibody responses. These titers remain relatively stable for several months after infection.

Townsend, L., et al (2020) **Persistent fatigue following SARS-CoV-2 infection is common and independent of severity of initial infection.** PLOS ONE 15:doi.org/10.1371/journal.pone.0240784 (available as a free pdf)

Authors' abstract: *Fatigue is a common symptom in those presenting with symptomatic COVID-19 infection. However, it is unknown if COVID-19 results in persistent fatigue in those recovered from acute infection. We examined the prevalence of fatigue in individuals recovered from the acute phase of COVID-19 illness using the Chalder Fatigue Score (CFQ-11).*

We further examined potential predictors of fatigue following COVID-19 infection, evaluating indicators of COVID-19 severity, markers of peripheral immune activation and circulating pro-inflammatory cytokines. Of 128 participants (49.5 ± 15 years; 54% female), more than half reported persistent fatigue (67/128; 52.3%) at median of 10 weeks after initial COVID-19 symptoms.

There was no association between COVID-19 severity (need for inpatient admission, supplemental oxygen or critical care) and fatigue following

COVID-19. Additionally, there was no association between routine laboratory markers of inflammation and cell turnover (leukocyte, neutrophil or lymphocyte counts, neutrophil-to-lymphocyte ratio, lactate dehydrogenase, C-reactive protein) or pro-inflammatory molecules (IL-6 or sCD25) and fatigue post COVID-19.

Female gender and those with a pre-existing diagnosis of depression/anxiety were over-represented in those with fatigue. Our findings demonstrate a significant burden of post-viral fatigue in individuals with previous SARS-CoV-2 infection after the acute phase of COVID-19 illness.

This study highlights the importance of assessing those recovering from COVID-19 for symptoms of severe fatigue, irrespective of severity of initial illness, and may identify a group worthy of further study and early intervention.

Zheng, B., et al (2020) **Satellite-based estimates of decline and rebound in China's CO_2 emissions during COVID-19 pandemic.** SCIENCE ADVANCES 6:doi.org/10.1126/sciadv.abd4998 (available as a free pdf)

Authors' abstract: *Changes in CO_2 emissions during the COVID-19 pandemic have been estimated from indicators on activities like transportation and electricity generation. Here, we instead use satellite observations together with bottom-up information to track the daily dynamics of CO_2 emissions during the pandemic.*

Unlike activity data, our observation-based analysis deploys independent measurement of pollutant concentrations in the atmosphere to correct misrepresentation in the bottom-up data and can provide more detailed insights into spatially explicit changes. Specifically, we use TROPOMI observations of NO_2 to deduce 10-day moving averages of NOx and CO_2 emissions over China, differentiating emissions by sector and province.

Between January and April 2020, China's CO_2 emissions fell by 11.5% compared to the same period in 2019, but emissions have since rebounded to pre-pandemic levels before the coronavirus outbreak at the beginning of January 2020 owing to the fast economic recovery in provinces where industrial activity is concentrated.

Franz, K., and C. Gudis (2020) **Documenting COVID-19.** JOURNAL OF AMERICAN HISTORY 107:692-695 (available as a free pdf)

Authors' extracts: *With closures caused by the COVID-19 pandemic, many public history organizations are facing a tidal wave of change in how they engage audiences and community members now and how they will do so in the future. At the same time, and more than ever in recent memory, we read in the mainstream press and across social media platforms of people's keen awareness of the "historic" moment in which we are living.*

For instance, the 1918-1919 influenza pandemic is an obvious precedent to today's pandemic, but that connection proved challenging for Anna N. Dhody at the Mütter Museum, Peter Liebhold at the Smithsonian's National Museum of American History, and Amanda L. Mahoney at the Dittrick Museum of Medical History, as their institutions, despite having been founded in the nineteenth century, have few holdings on the earlier pandemic.

But the flu was battled largely in the home, with care provided by the invisible ranks of family, nurses, neighbors, and volunteers. These archival silences are loud for participants in all three of our discussions.

They consider here the challenges of documenting the experiences of those who provide the bulk of care today: the heavily immigrant, often-undocumented, and largely female home health aides, nursing home workers, and nurses, the laboring bodies along our food supply chains, as well as the refugee communities.

Dhody, A.N., and M. Evans (2020) **Pandemics, protests, and disasters.** JOURNAL OF AMERICAN HISTORY 107:695-700 (available as a free pdf)

Author's extracts from a seminar: Dhody: *It just so happens that in October 2019, we put up an exhibit called "Spit Spreads Death," about the 1918 influenza pandemic, with an emphasis on Philadelphia. This was one of our most ambitious and expensive exhibitions, mounted with significant help from external organizations such as the Pew Charitable Trusts.*

It centers on the fourth Liberty Loan Drive parade, held to raise money for the World War I effort, but also the reason that Philadelphia had the highest death rate per capita from the flu among other U.S. cities. Was the money raised?

Yes. But thousands of people died in the weeks after the parade. While we cannot state empirically that the parade was the catalyst of the flu outbreak, the preponderance of evidence weighs heavily in favor of this hypothesis.

In the past twenty years, we've been able to access ancient DNA (aDNA) through technology. We've also recently discovered that paper archives are also biorepositories.

We're trying to get aDNA from the letter writers who licked envelopes in 1918 and 1919. I've been reaching out to archives and finding out that not everybody saves the envelopes. They save only the letter.

People have come to us wanting to donate letters from their family members from 1918 in which they're saying in the letter, "I had the flu and I'm better now" or "I'm still not feeling very well." And if we have those envelopes, stamped by date, in these paper archives, we can test the envelope glue strip to see if the person had active influenza or had antibodies.

We're trying to unlock those because we might find out if this thing we're calling coronavirus is a novel virus. We don't actually know.

Evans: *The goal when collecting these materials is to assure people that you are preserving it for future understanding so that you get the whole picture and to not go back to the traditional way of archiving where you get only whatever the donor provides. Or what somebody has already scanned and sanitized.*

The process has been interesting and tricky because not only do you have to record people through these virtual channels but you also need to encourage people to keep records that are born digital, and think about version control.

At right: If all else fails, have a cupcake. This Santa costume from the bakery at my local Safeway.

ZINE LISTINGS

[I only list zines I receive from the Papernet. If the zine is posted on www.efanzines.com or www.fanac.org, then I don't mention it since you can read it directly.]

[The Usual means $5 cash ($6 overseas) or trade for your zine. Americans: please don't send cheques for small amounts to Canada or overseas (the bank fee to cash them is usually more than the amount) or mint USA stamps (which are not valid for postage outside USA). US$ banknotes are still acceptable around the world.]

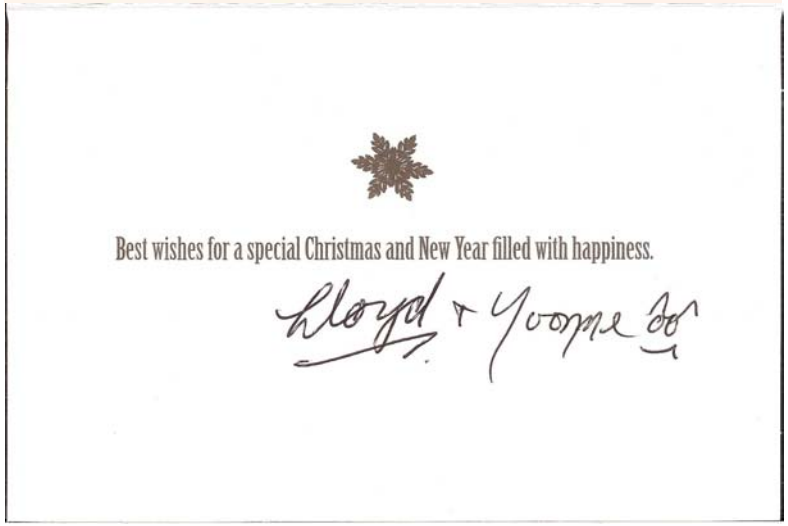
FOR THE CLERISY #91 (The Usual from Brant Kresovich, Box 404, Getzville, New York 14068-0404) The only issue he published this year, but he had a good excuse: quintuple bypass surgery in January. That pretty much trumps everyone else's excuse as to why they were late with their zine. His recuperation gave him the chance to read and review older books worth a second look, a variety of which were mentioned here.

LETTERS TO THE EDITOR

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

[There was a time within living memory when, during the Christmas season, every household had a basket on the coffee table full of Christmas cards or, alternatively, strung along the living walls. It was considered polite etiquette for visitors to leaf through the cards or admire the display.]

[I remember when my brother and I as young boys would help our mother put stamps on a hundred or more outgoing cards, about average for families. Stationery stores sold blank address books used specifically to keep track of who sent cards last year and who got them in return.]



[Lloyd and Yvonne Penney of Etobicoke, Ontario, are the among the very few who still send me a Christmas card.]

[From Getzville, New York, Brant Kresovich also sent a card, as well as the only issue of his zine he published this year.]

FROM: Ray Palm 2020-12-05
Plattsburgh, New York

OPUNTIA #489: [Re: photos of people in bubbles] See you're keeping busy with your photography. On page 13 you mention the DJ inside the plastic bubble. Have you ever used a circular polarizer to cut down reflections? It cuts down on light and you have to be careful holding the camera with a slower shutter. A friend stopped using a DSLR and he just takes photos with his smartphone. Smartphones are impressive but I can't afford one.

[The photos around Cowtown were taken with my smartphone. I have a digital SLR camera with telephoto but only use it out in the mountains where there is no substitute for a real telephoto lens. Too bulky and too conspicuous to carry a camera around town, whereas no one looks twice at a smartphone user.]

[I don't know how American telecom plans work but in Canada smartphones are free with a two-year contract. After the contract expires, the user keeps the smartphone and usually goes on a month-to-month billing at the same price. I have a Samsung Galaxy 7 running Android 8, obtained in 2016.]

[After my contract expired, I doubled my data allowance for no extra cost, which came in handy for all the Zoom conferences I watch. My 2006 computer is not online, so all my Internet connections are over my smartphone, with a memory stick to transfer files back and forth. As an example, OPUNTIA is prepared on my laptop, then transferred to my smartphone via memory stick.]

I agree that the perpetual circle of shutting down then opening up then shutting down etc. is just creating a Covid infection roller coaster. Just be glad you don't have tRump as your leader, whining like a baby about losing the election while completely ignoring the pandemic.

[Prime Minister Justin Trudeau was taught good manners by his parents but he is using the pandemic as an excuse to pander to the socialists. To be fair, the provinces and territories decide pandemic policy, and he only has control over international borders, airports, and federal lands such as national parks. The advantage he has is that he can order the Bank of Canada to print unlimited currency to pay his bills, while the provinces and territories are stuck with their own tabs. Unlike the U.S. Federal Reserve, which is nominally independent of the American government, the Bank of Canada reports to the Prime Minister and does as it is told.]

FROM: Lloyd Penney 2020-12-19
Etobicoke, Ontario

Today's been a crazy day. Today is Yvonne's birthday, and instead of dinner, we thought we'd do breakfast! Took a number of calls to a local restaurant (Cora's) with a faulty VOIP telephone, but the order got in, we picked it up, took it home, and was reminded of just how much food Cora's sells you. We never had lunch or dinner today; didn't need either.

OPUNTIA #488: The pandemic continues, and now, the vaccines are here. We suspect we won't be vaccinated for a few months yet, but we social distance and wear our masks, so we should be okay until then.

[I intend to wait until most other people have been vaccinated. Those who still work and the elderly can go ahead of me. They need vaccination more than I.]

Love the COVID-19 postage stamps.

[They're the rage among philatelists. The hottest item is the Austrian stamp printed on toilet paper.]

Getting people to follow regulations about masks, social distancing, and not gathering in big groups might as well be herding cats. A smack upside the head wouldn't work, as satisfying as that might sound, and you can't make these children in adult bodies do anything they don't wanna do. No wonder Ontario, Quebec, and Alberta have such high case rates.

Re: The When Words Collide date. I hope we are able to return to convention attendance at that time. The big anime con in Toronto, Anime North, has announced a new date for 2021, near the end of July, instead of its traditional end of May date.

[More information about Calgary's annual readercon can be had at www.whenwordscollide.org]

Some may think those dates as optimistic, but there may be vaccines for all by that time, maybe. If 2020 was the Year of the Pandemic, 2021 may be the Year of Recovery, and we may not be back to something resembling normal until 2022. I hope I am wrong.

[The economy will be in shambles until at least 2022. I'm glad I took early retirement in 2010.]

OPUNTIA #489: I have seen stories around here of Little Free Libraries being set up, and then being firebombed or set alight, or otherwise destroyed by those who are bored, with no creative ideas at all.

[Not in Calgary to my knowledge.]

I never saw those commemorative stamps for XWA/CFCF, and I was a shortwave/AM/FM DXer for a long time. I swallowed the story about KDKA [Pittsburgh, claiming to be the world's first broadcast station] for the longest time before finding out more about XWA [Montreal, which actually was the first commercial station].

[Re: vanity licence plates] I see so many vanity plates in Toronto. We'd thought to get some, but the price put us off them, and probably by now, most good combinations are gone.

[Depends what you're looking for. I suspect something like ZINESTER or LOCCER would still be available.]

Restaurant food of any kind has gotten ridiculously expensive. Yvonne's birthday breakfast cost close to $60. I can't afford many of those, but today was the best reason possible.

I expect to read about some savage spikes in COVID-19 cases just after Christmas and New Year's.

[Alas for human nature. The pandemic has brought out the worst in many people.]

Ah, good and stinky Camembert cheese! One of my favourites, alongside Brie, Monterey Jack, and a mild Cheddar. We certainly enjoyed Red Leicester and Double Gloucester cheeses last time we were in Britain.

[My favourites are Applewood Smoked Cheddar, Asiago, Oka, 2-year-old Cheddar, and Havarti. Double Gloucester is incredibly expensive here, about $6 per 100 grammes.]

FROM: Theo Nelson
Calgary, Alberta

2020-12-21

[Theo's quarterly postcard, this one for the winter solstice.]

tnelson@bex.com

I see the skies of December,
Daytime blues and greys
Gleam with harsh light,
While the black nights twinkle.

Whites and blue greys
Cover the land like a blanket
Broken by leafless skeletons
And the evergreens.

Days grow shorter in the North
While southern climes face
The full glory of the Sun,
The Solstice arrives.

"Seasonal Greetings!"

Winter Sky,
Wit' Lines.

To:

Dale -

Be smart, be safe, be kind.