OPUNTIA 498

Early April 2021

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.

AS I STROLLED OUT ONE DAY

photos by Dale Speirs

Calgary has had a lovely spring so far and I have been doing a lot of walking to work off all those cupcakes of which I eat too many. These are some photos from the last week of March and first week of April.

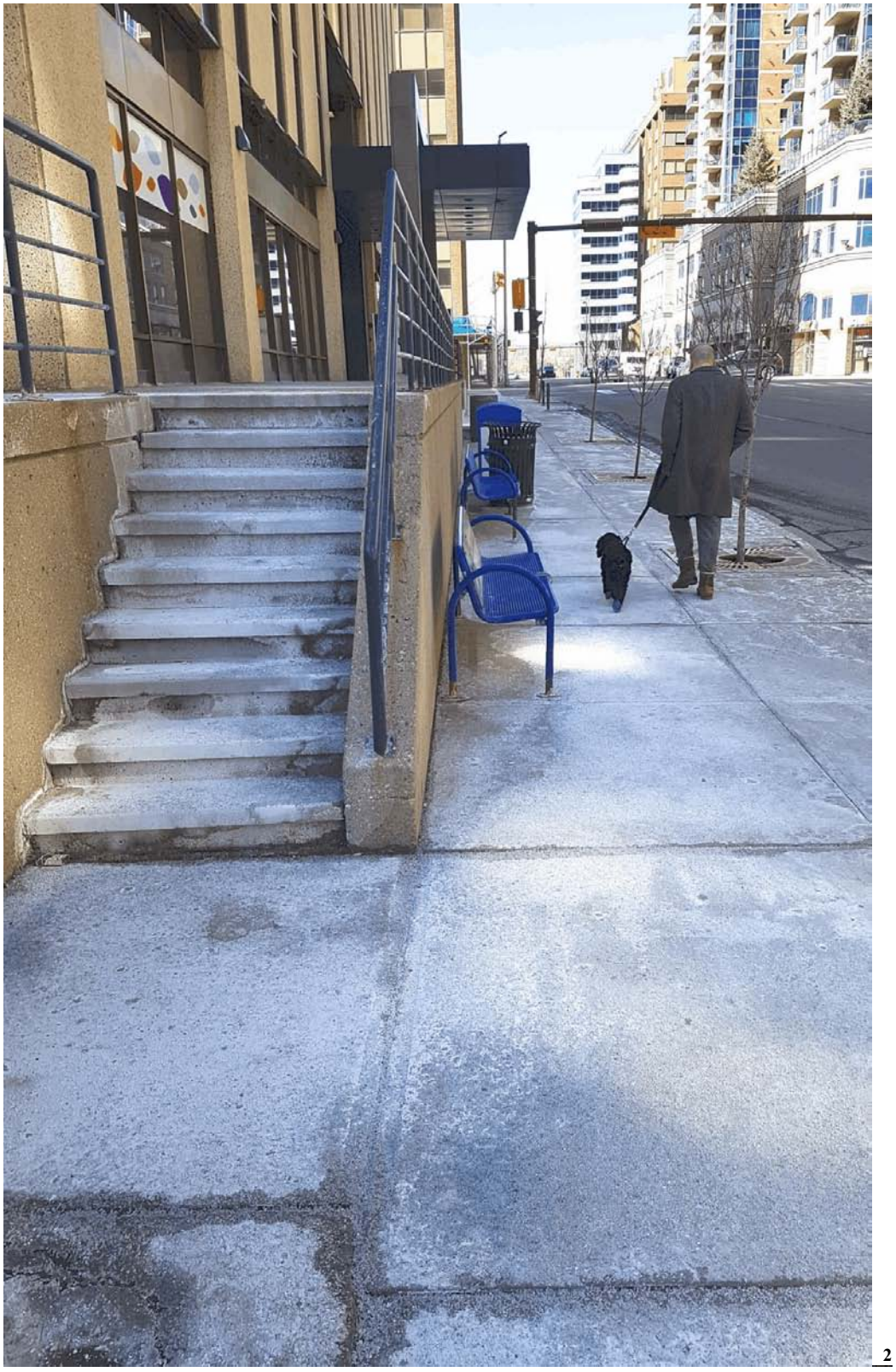
The cover photo was taken in Fort Calgary Park at the junction of the Bow River and Elbow River, looking inland. The structures outline where the original fort was when the North West Mounted Police arrived in August 1875. If you look closely at the far side on left centre, you can make out the delineation of the far palisade.

The Mounties only ever intended their fort to be a temporary facility, and it was replaced a few years later by a barracks. The fort was intended for defence against the Blackfoot Confederacy, but smallpox pacified them so fast that the fort became redundant. When Calgary's first post office opened in 1883 after the transcontinental railroad arrived, the Fort part of the name was discarded.

Over the years there were occasional proposals to recreate the original fort, palisades and all, but they came to naught. The principal objection was that the place, by contemporary accounts, was a shoddily built job thrown together for bottom dollar, and never served any useful purpose except to house the Mounties until they could get a better building built.

As a compromise, Parks Dept told the recreators they could outline where the fort was. No trace of aboveground structures remained by 1900, but archaeologists had little trouble locating the foundations of the palisades and buildings by the soil disturbance.

At right is a common sight every spring, sidewalks turned white from all the salt laid down during the winter. The spring rains will wash it away.



Below: Nothing ever happens in my neighbourhood in southwest Calgary. Out walking one day, I thought I might have some action photos of a cat fight on my neighbour's fence. Just as I took this photo, the cat on the right stopped, growled at the other feline, and, honour satisfied, retreated.

At right: Easter was late this year, not until April 2. Few people decorate their yards for it and this was the only display I found in my neighbourhood.

MY WEIGHT GAIN PROGRAMME IS GOING VERY WELL
photos by Dale Speirs

More cupcakes from my local Safeway. The ears of the Easter rabbit were halves of a marshmallow cover with pink sprinkles. The roses are always my favourite; this is the latest variation.

A couple of Valentine's Day designs.

Piles of crushed Oreo cookies and chocolate fudge.

WHEN WORDS COLLIDE 2021

WWC takes place online August 13 to 15. I encourage readers of this zine to visit the virtual WWC convention this year. Wherever you may be, New York City, England, or Australia, please check out a few panels online this summer. It's free to register.

The Website is whenwordscollide.org. WWC Online 2021 passes are now available. Registration is simple, easy, and free. Visit the registration page to get started: www.whenwordscollide.org/Registration

2021 Festival Guests.

Cathy Ace - past president of Crime Writers of Canada and award-winning author of mystery fiction.
Vicki Delany - bestselling crime writer and winner of the 2019 Derrick Murdoch Award.
Steena Holmes - bestselling author in multiple genres
Fonda Lee - award-winning speculative fiction author and martial artist.
Dave Reynolds - Local Authors Manager for Indigo/Chapters/Coles for Western Canada. [There is only one chain bookstore in Canada, owned by Heather Reisman and operating under multiple names.]
Morgan Rhodes - bestselling and award-winning YA fantasy author aka Michelle Rowen, bestselling romance and paranormal author, past president of Toronto Romance Writers.

2021 Programme.

The festival programme is currently being revamped for a virtual platform. Most of the content will survive the transition. Client virtual presence software is free and easy to use.
www.whenwordscollide.org/Events/Festival_Program.php
If you would like to present in our online program, there is still space. Find out how right here:
www.whenwordscollide.org/Become_Involved/Call_for_Presenters.php

There are 10 Master Classes for 2021 ranging from novel writing to getting published to marketing to the inside scoop to working with Indigo. www.whenwordscollide.org/Events/Masterclasses.php

In Places Between Short Story Contest.

The Robyn Herrington Memorial Short Story contest returns with guest judges Susan Forest, Robert Bose, and Brian Hades. [Herrington was an active convention fan in Calgary for many years. Cancer claimed her in 2004 at age 43.] There is no entry fee, but entrants must be registered for the free WWC Online 2020 festival via Eventbrite (registration open soon).

All genres welcome. Two submissions per entrant maximum. Submissions must be short stories up to 4,000 words maximum. Deadline for submissions is midnight on May 1, 2021. Full details at https://ipbcontest.weebly.com/

Public Events.

As we are online this year as a free Eventbrite festival, all regular festival events are open to the public. A selection of webcasts from our 2020 online festival, as well as podcasts from earlier festivals, are available on the WWC YouTube Channel. Webcasts from from our 2020 online festival are only available on our YouTube Channel. Podcasts are available on either channel.
Podcast channel: http://whenwordscollide.libsyn.com/
YouTube channel:
www.youtube.com/channel/UCYLP-1XdcKWDyRftkL_a8lQ/

Recent additions include:
"Building A Protagonist From the Ground Up" with presenters Angela Ackerman, Karen A. Chase, Kevin Weir, and Elissa McColl (2019 in-person festival)
"Armchair Travel Through Fiction" with presenters Diane Terrana, Elissa McColl, Jay Martin, and Rena Mason (2019 in-person festival)

2021 Aurora Award Nominations.

CSFFA (Canadian Science Fiction and Fantasy Association) members are now encouraged to nominate their favourite works and activities accomplished in 2020 by Canadians in the field of science fiction, fantasy, and horror.

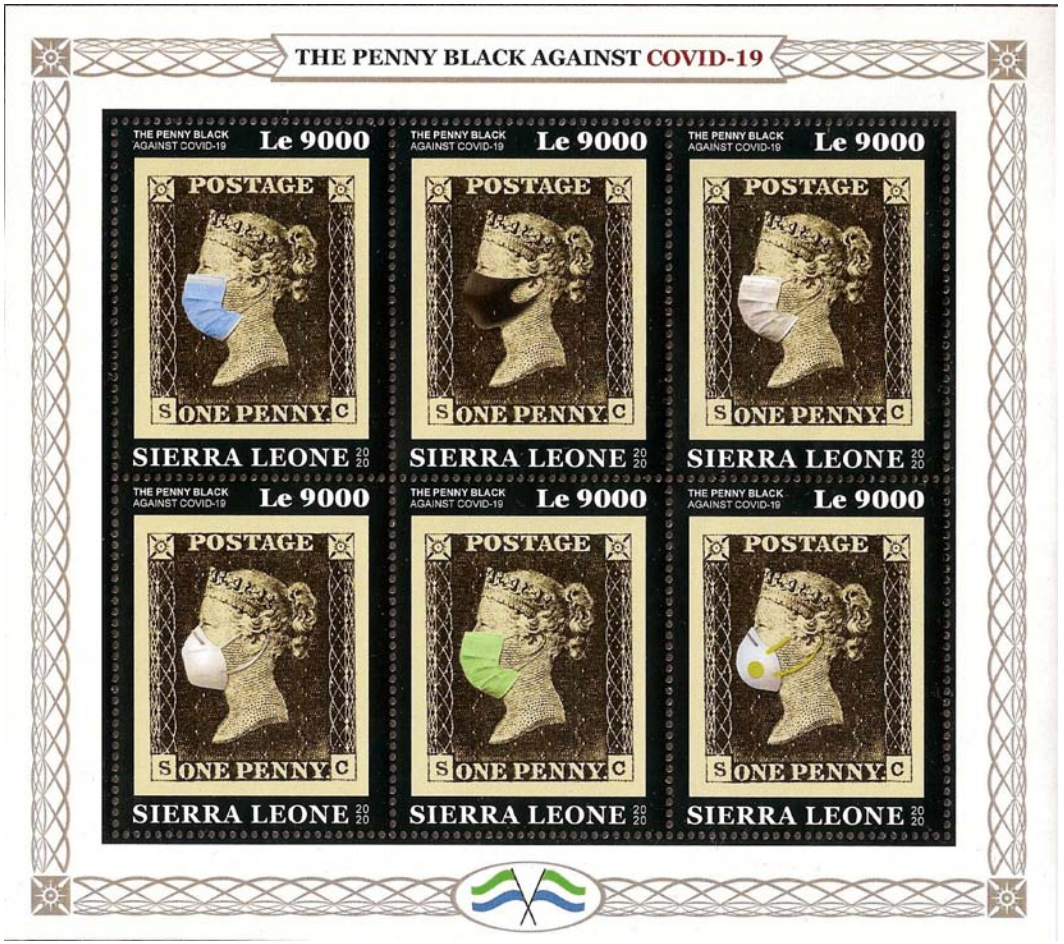
If you are a fan of speculative fiction but not a CSFFA member, annual dues are only $10. Membership includes the right to nominate, vote, and download ebooks of most of the award finalists. For more details about the awards visit: www.prixaurorawards.ca

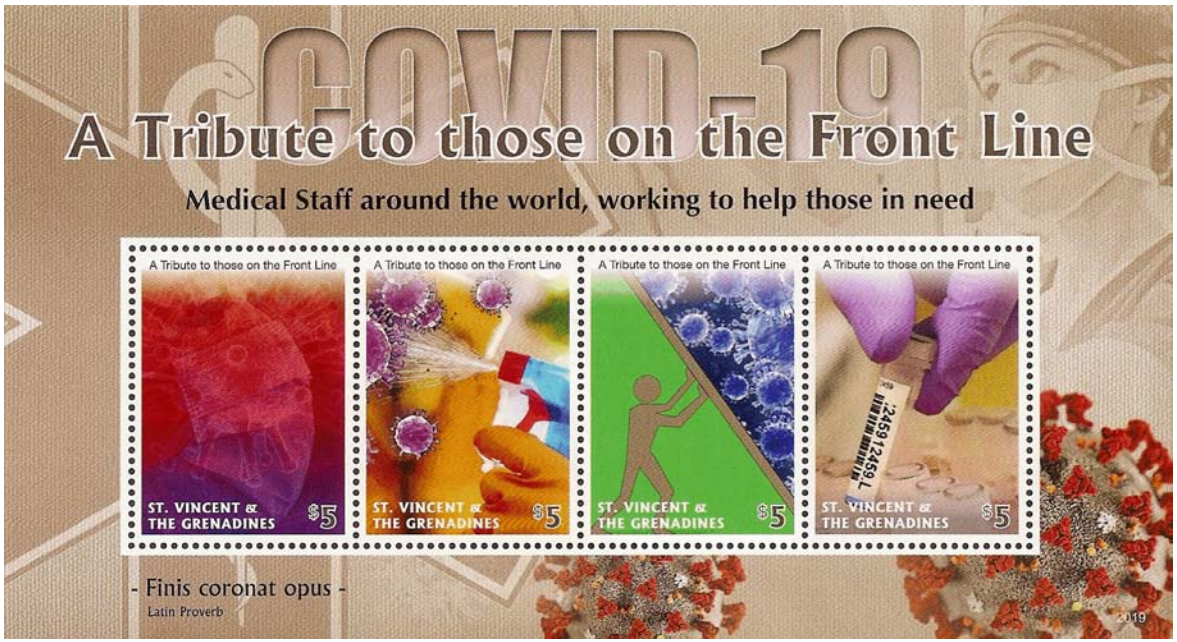
CURRENT EVENTS: PART 17
by Dale Speirs

[Parts 1 to 16 appeared in OPUNTIAs #474, 475, 479, 480, 483, 484, and 488 to 497.]

Philately.

New acquisitions for my stamp collection. Images are not to the same scale or actual size.





At least Uruguay has a plan. Justin Trudeau and his Liberal government have been stumbling from one mess to another throughout the pandemic. The sad part of it is because they gave away so much money to the Millennials, they'll probably be re-elected.

Clippings.

Whatever it is, coronavirus has made the mighty kneel and brought the world to a halt like nothing else could.
Arundhati Roy, 2020-04-03, FINANCIAL TIMES

As of April 4, Canada had 1,001,879 cases of COVID-19, with 23,062 deaths and 6,233,833 vaccinations. Canada has a population of 38 million.

Seen In The COVID-19 Literature.

Dattner, I., et al (2021) **The role of children in the spread of COVID-19: Using household data from Bnei Brak, Israel, to estimate the relative susceptibility and infectivity of children.** PLOS COMPUTATIONAL BIOLOGY 17:doi.org/10.1371/journal.pcbi.1008559 (available as a free pdf)

Authors' abstract: *One of the significant unanswered questions about COVID-19 epidemiology relates to the role of children in transmission. This study uses data on infections within households in order to estimate the susceptibility and infectivity of children compared to those of adults.*

The data were collected from households in the city of Bnei Brak, Israel, in which all household members were tested for COVID-19 using PCR (637 households, average household size of 5.3). In addition, serological tests were performed on a subset of the individuals in the study.

Inspection of the PCR data shows that children are less likely to be tested positive compared to adults (25% of children positive over all households, 44% of adults positive over all households, excluding index cases), and the chance of being positive increases with age.

Analysis of joint PCR/serological data shows that there is under-detection of infections in the PCR testing, which is more substantial in children.

We estimate that the susceptibility of children (under 20 years old) is 43% of the susceptibility of adults. The infectivity of children was estimated to be 63% relative to that of adults.

Monod, M., et al (2021) **Age groups that sustain resurging COVID-19 epidemics in the United States.** SCIENCE 372:doi.org/10.1126/science.abe8372 (available as a free pdf)

Authors' abstract: *Following initial declines, in mid 2020 a resurgence in transmission of novel coronavirus disease (COVID-19) occurred in the US and Europe. As COVID19 disease control efforts are re-intensified, understanding the age demographics driving transmission and how these affect the loosening of interventions is crucial.*

We analyze aggregated, age-specific mobility trends from more than 10 million individuals in the US and link these mechanistically to age-specific COVID-19 mortality data.

We estimate that as of October 2020, individuals aged 20 to 49 are the only age groups sustaining resurgent SARS-CoV-2 transmission with reproduction numbers well above one, and that at least 65 of 100 COVID-19 infections originate from individuals aged 20 to 49 in the US.

Targeting interventions, including transmission-blocking vaccines, to adults aged 20 to 49 is an important consideration in halting resurgent epidemics and preventing COVID-19-attributable deaths.

Speirs: In Canada, governments have established the vaccination policy of reducing the death rate by targeting elderly and other groups most likely to die from the virus. Younger people are more likely to survive if infected, which is why the 20 to 49 method is ignored.

There is a lot of crying and whining from special-interest groups in Canada that they should be first in line. One thing the pandemic has demonstrated is how selfish and uncaring of the public good that Canadians are in general, whether me-first groups, anti-maskers, CERB cheaters, or hamsterkauf hoarders. Historians will look back on this as a shameful period in our history.

I'm booked for my vaccination on May 12. I was waiting to see if my regular pharmacist would be on the list of approved vaccinators. Apparently their facilities were too small, so I finally booked another pharmacy. When the pandemic began, my doctor, a very practical man, gave me a 400-day prescription refill and said he didn't want to see me again for a year.

Ronkowitz, K., and L.C. Ronkowitz (2021) **Online education in a pandemic: Stress test or fortuitous disruption?** AMERICAN JOURNAL OF ECONOMICS AND SOCIOLOGY 80:doi.org/10.1111/ajes.12377 (available as a free pdf)

Authors' abstract: *This study explores higher education and the ways in which the shutdown caused by the COVID-19 pandemic have accelerated the evolution of online education. This movement from face-to-face (F2F) education to a virtual environment was forced and unplanned.*

It can be viewed as a stress test for digital teaching and learning in the higher education system. The study addresses course conversions and the progress of online education in response to the current crisis.

No one can predict the long- term impact of the pandemic on societies and economies in the years ahead, but we think it is likely that the disruption of education in 2020 in both higher education and K to 12 schools will be felt for several years.

High school seniors who graduated in 2020 or will graduate in 2021 will represent a different kind of college freshman. The slump in knowledge that occurs when students are away from the classroom for several months will certainly be magnified by a year or two of modified learning.

A number of lessons were learned from the pandemic about online learning. If an online course is built with integrity, meaning that it is well constructed using all of the design elements, it can be delivered using other modalities, including F2F.

During the pandemic, students and faculty understood that they needed to become more digitally literate. They understood that technology is a way to integrate course content into their lives. Students did not see the abrupt movement to online education as an opportunity to learn differently.

If there were doubts before, it became clear that there is a digital divide across the entire nation in terms of infrastructure and access to technology.

Krishnamoorthy, R., and K. KeatinG (2021) **Education crisis, workforce preparedness, and COVID-19: Reflections and recommendations.** AMERICAN JOURNAL OF ECONOMICS AND SOCIOLOGY 80:doi.org/10.1111/ajes.12376 (available as a free pdf)

Authors' abstract: *This article explores the impact of COVID- 19 on the higher education crisis and its implications for workforce preparedness and the future of work. It takes an integrative look at the evolving role of three primary actors involved in higher education: traditional universities, corporate universities, and educational technology companies, before, during, and after the pandemic.*

What about physical campuses and classrooms, either in traditional or corporate universities? It is too soon to predict whether face-to-face education will permanently fade. Paradoxically, the longer the pandemic continues, the greater students' desire to return to the campus grows. There will be more blended learning and online courses, but traditional classrooms will still be the primary choice of most students.

The quad, the lecture halls, the dorm, the fraternity parties are well-known totems of the quintessential college experience and will not easily be forgotten. Nor should they be. Casual encounters, conversations, and social interactions allow individuals to develop a complex web of relationships that, in turn, foster trust, kinship, and community.

Who would have forecast that nearly 70 percent of the workforce and nearly all the world's 1.5 billion students would go online in a matter of weeks?

IF YOU AREN'T SQUAMOUS,
THEN WHY ARE YOU TRYING TO BE ELDRITCH?: PART 15
by Dale Speirs

[Parts 1 to 14 appeared in OPUNTIAs #298, 333, 340, 352, 365, 395, 410, 415, 422, 443, 465, 480, 486, and 492. Issues #22 and 63.1A have related articles on H.P. Lovecraft.]

H.P. Lovecraft died in 1937, which means that all his works are now in the public domain. As a result, the trickle of pastiches about the Cthulhu Mythos is now a flood. It would take a deep purse to keep up with all the books pouring out and I don't even try. Herewith are some of the newer publications in the Mythos.

Life And Death In Arkham.

DEATH ON THE ARKHAM EXPRESS (2019) by Byron Craft was a 75-page novella available online as a trade paperback. It was the fifth in a series about the Arkham Detective, no name ever given, set during the Great Depression. The books are independent and you don't need to read any of the others to follow the story. I reviewed the first four stories in OPUNTIA #410.

The Arkham Detective (hereafter AD) was returning home from New York City on board the Arkham Express. The train, despite its name, was a local that stopped at every village en route in order to refill with water. The steam locomotives were antiques, even for the 1930s.

The story got off to a ripping start when a diner car waiter was decapitated. The AD noticed bare footprints tracked through the blood. They became smaller as they reached the exit, from human size down to dog pawprint size.

The AD was the only person on board with any law enforcement capability, and that only as a private investigator. No one saw the crime happen. He got all the passenger names because some would be getting off the train before it finally arrived at a stop big enough to have a police force, which would be Providence, Rhode Island.

He met Nigel Guest, who was a writer of weird fiction and was bound for Providence to visit H.P. Lovecraft. The AD was suspicious of a woman who claimed to have read all of Emily Brontë's novels. (She was a poet who only published one novel.)

Eventually a railroad detective turned up. So did a passenger, murdered the same way as the first victim. The death toll climbed steadily and so did the weirdness. White worms in the skulls of the dead were the least of the eldritch happenings. The question was whether there would be anyone left alive by the time the train reached Providence.

Eventually the AD met up with a Mythos alien on the train and from it received a lengthy infodump. It was a police officer of sorts, coming from the space between dimensions to stop parasitic worms called Doel. The worms reproduced inside humans but would spread from the train, which had been their portal. Eventually they would eat all life on Earth, then each other, and finally die out after rendering the planet sterile.

The responsibility of the AD was to burn the bodies, and the train. A fight to the finish ensued with one of the Lovecraftian zombies and the job was done. Other than the clichéd ending, the story read well. Life during the Great Depression was the grey background, made weird by the Mythos.

WHO STOLE THE NECRONOMICON? (2020) by Byron Craft was an 80-page novella, the sixth in the Arkham Detective series. The Arkham police were investigating a book theft from the Miskatonic University Library. Book thefts from libraries are as old as libraries themselves, but when the book is the NECRONOMICON, the matter becomes more serious than a missing atomic bomb.

The Arkham Detective had more important matters on his mind though. He had sold a Cthulhu Mythos story to WEIRD TALES and had an request from the editor for more stories. WEIRD TALES paid better than the detective business, which gives you an idea how poorly paid private investigators were.

The night janitor turned up dead the day after the theft, which confirmed the heist was an inside job. Several different police agencies sealed the borders of Arkham, ostensibly because of the murder, not daring to mention the theft of the book.

It didn't take long for news of the NECRONOMICON theft to get out, which threw fuel on the fire. The denizens of the town were riled up but could do nothing. Worse yet, Walpurgis Night was approaching. More than a few people had reasonable cause to believe the stolen book was going to be used on the night to stir up some Elder Gods or the like.

Compounding AD's problems, the WEIRD TALES cheques bounced higher than a rubber ball. He had been taken in by imposters counterfeiting the cheques. Those imposters were almost certainly the book thieves. They were still hanging about town because they needed to do their occult work in Arkham. Their plan had been to keep the AD away from his detective work, writing weird fiction instead of living weird fact.

More than a few abandoned houses were in Arkham, and not because of the Great Depression. AD and his assistant found the house that seemed to hold an altar suitable for the summoning of Elder Gods. A rat with a human face and hands for front paws kept making cameo appearances.

Many eldritch alarums ensued. The AD fought to the death with the thieves, recovered the NECRONOMICON, and burned down the house with the altar as a public service. A Walpurgis night to remember.

Life In The Alma Mater.

IT CAME FROM MISKATONIC UNIVERSITY (2020) is an anthology of 16 stories edited by Scott Gable and C. Dombrowski. This is a sequel to their previous anthology WELCOME TO MISKATONIC UNIVERSITY, which I reviewed in issue #492 of this zine. I won't mention all the stories, just a few that I liked.

The first story was "Identity Crisis" by Lynne Hardy, about the university's project to digitize all its documents and paperwork. Much like every other learned institution is doing these days. Of course, the difference was that many of those books and documents were dangerous just to read, much less scan and store on a server. Some readers went mad, and some inadvertently summoned beings from other dimensions. Many documents refused to be scanned, their text constantly moving about.

The story was narrated by an alien consciousness which had spent several centuries occupying the minds of various human hosts. The narrator was not malign but simply wanted to gather knowledge. Computer technology and the Internet had evolved far enough that for the first time it could occupy the MU servers and intranet.

Then the alien mind discovered the joys of trolling, hacking, cancel culture, and fake news. It found it could create greater emotional turmoil and agony on the social media than anything those Elder Gods could do by waving tentacles about.

"Fear Of A Black Planet" by Tonya Liburd was about a young Haitian woman Zane who lived with her uncle, who was a janitor at MU. He was murdered by a group of four students who wanted his body for reanimation experiments based on the previous work of Herbert West.

Their mistake, and West's, back in his day, was not realizing that Haitians knew how to reanimate long ago. Zane had been taught voodoo by her kinfolk and went after the killers. She was a much more experienced reanimator and revived her uncle as a zombie to do her work. The original type, not the Hollywood version.

"Office Hours And After" by S.L. Edwards began with the murder of a popular student on campus. His heart had been cut out and one of those Cthulhuian symbols painted on his torso with his own blood. All very eldritch.

The narrator was a co-ed who vowed revenge. She tracked the killer, one of the professors. In the end, she revealed herself as an itself, one of those critters from the spaces between dimensions.

"Student Body" by Richard Lee Byers was an account of a grievance hearing initiated by student Michael Wilson against certain members of the faculty. As part of a practicum, he agreed to have his brain transplanted into an ambulatory canister so aliens could take him out into space for exploration, including a visit to the planet Yuggoth. The rest of his body was frozen and placed in the care of the Faculty of Medicine.

Unfortunately, while Wilson was out in space, some eldritch critters gnawed through the power cord to his crypt. Upon his return to Earth, he discovered his body had rotted away. Several suggestions were made, such as his brain being transplanted into the body of a townfolk man. The tribunal chairwoman was more concerned hushing up the problem and with MU's reputation. Wilson went berserk, as was quite understandable, and began housecleaning the faculty.

"Hashtag TPE" by Dawn Vogel was about a student volunteer leading a group of prospects on a tour of the MU campus. Considerably more dangerous than other universities but the tour leader only lost three people.

One poked his head into a classroom where a summoning was in progress, and another stubbed her toe on an artifact in the anthropology laboratory and was instantly teleported elsewhere. The third vanished in the shuffle, the shuffling being done by a crowd of eldritch beings. At MU, just surviving four years was enough to get a degree.

"The Secret Trials Of Oscar Bloom" by Chuck Regan began with the protagonist dealing with another student's attempted sabotage of his midterm exam by hexing him. That took a bit of trouble to remedy, mainly by hexing back in triple. From there to the midterm, which was a practical exam for astral projection.

"Mowbray's Museum" by Oliver Smith was an account of the tribulations of Dr Perkin Lochinver, recently appointed to MU as the Reader in Light Romantic Literature. He didn't have any students, there being no interest in the paperback novels of Dame Barbara Cartland.

With his low salary, he had to settle for a cheap apartment above the museum. The mould didn't bother him as much as the non-Euclidian walls and floor, which made the furniture wobble. The museum's displays were definitely eldritch, such that the MU football team used a tour of it as an initiation rite for rookies.

Lochinver, meanwhile, had his own problems with a mould on the living room wall that budded out some (insert Lovecraftian adjective here) 3-D growths. His landlady tried to scrub away the mould with bleach but instead it scrubbed her away. Mowbray had his problems and came to a bad end.

"The Librarian's Handbook" by Jennifer Brozek was about the problems in returning an interlibrary loan to its source. The book was written in the Yog-Sothothery style and had a tendency to kill librarians. The tome was finally returned to its shelf in the library of a Washington State college affiliated with MU. Only one fatality and a coup d'etat amongst the library staff.

"Ordinary People" by Mary Berman had two narrative tracks. An MU frat party decided to raise the Elder Gods and almost succeeded. A medical student failed her anatomy exam when the shoggoth she was dissecting got up and left the room. And how was your day?

"It Takes A Special Kind Of Girl To Steal The Necronomicon" by Jill Hand has a title that pretty much gives away the story, but there is a clever twist at the end. A coed was hired to steal the book from the MU library. The theft went off successfully and she received her payment. Several times during the story her Arabic ancestry was mentioned, which came together with a twist about Abdul Alhazred and the curse he put on the book.

"Between The Holes" by Dani Atkinson was a stream-of-consciousness essay by an MU student who was trying to cobble together a term paper just before the deadline. Been there, done that, haven't we all.

The difference was that she was writing about mistranslations of the NECRONOMICON. She decided to translate an extract from Arabic into three different languages using Google Translate, then chant the spell in those languages. They never did find her body. The university scientists were greatly excited by the rift in the sky she opened up.

Pastiches: Short Stories.

"Signs And Hortense" by Fraser Sherman (2009 August, ARKHAM TALES, available as a free pdf from www.archive.org) is an hilarious story about spinster Hortense McAllister. She was a born-again Yog-Sothothite always preaching to her annoyed co-workers at the First Miskatonic National Bank. She didn't have friends outside work.

She awaited the Rapture with joy and impatience. The Cthulhuian Rapture, not that other one. Her dreams finally came true when the Elder Gods came. But not without a few regrets. A well-written story that perfectly parodies the Left Behind crowd.

"The Caverns Of Al-Shog Qaleth" by Robert J. Santa (2009 November, ARKHAM TALES) at first reads like a cross between Lovecraft and any Arabian fantasy adventure story. The derring-do of the protagonist Khalil seems as if Robert E. Howard wrote it, a quest into dark caverns below the desert against Cthulhuian blobs.

The twist was that Khalil was there to harvest the protoplasm of the blobs, which had medicinal properties. It was the eldritch beasts who were the prey, not the humans. An interesting take on the Mythos.

IF THE WIND COULD BLOW MY TROUBLES AWAY: PART 7
by Dale Speirs

[Parts 1 to 6 appeared in OPUNTIAs #326, 355, 382, 392, 408, and 450.]

SUPER CYCLONE was a 2012 Asylum movie with all the production values expected from them, such as SFX that would not look out of place in a 1980s television movie. After the leading actors, the opening credits listed the production crew beginning with the makeup person, which gives you an idea where their priorities were. The writer and director Liz Adams was listed at the end of the credits.

The plot began with a drilling rig off the Catalina coast punching into a magma chamber. Catalina Island was turned into a volcano. Why this would be so was never explained, and no further scenes occurred on the island. The second plot line was a cyclone building up over the coast.

The storm was monitored by a NOAA ship with all the latest electronics, but the captain steered the ship on an exposed deck with a wheel that might have been used a century ago. The actor who played the captain (and why was he steering instead of a helmsman?) was a top contender for any awards for over-acting.

Actress Ming-Na Wen played the heroine, a meteorologist named Dr Jenna Sparks. She wore pale makeup to make her look more Caucasian. A switch from the Hollywood tradition of white actors playing oriental characters. She did her share of over-acting. The FEMA team consisted of two USMC officers, a graduate student, one mid-level bureaucrat, and a couple of eraserheads to do the heavy lifting.

The cyclone was explained as a product of the magma release by the oil rig. Long shots of the oil rig showed the cyclone blasting the decks with rain, and later the rig was fully involved by fires started by the magma. Close-up scenes on the decks, however, were blue sky and only an occasional puff of flame.

A giant waterspout, apparently rendered in 8-byte graphics, picked up the NOAA ship, spun it around a few times, and then dropped it back into the water. The ship made it into port at Los Angeles with the supercyclone chasing them. The storm then chased Sparks and company well into the desert.

Throughout the movie, there was no continuity between camera shots. Outdoor scenes vacillated between blue sky and torrential rain. Sparks and her colleagues set out on an odyssey across the desert. Hood-mounted cameras showed their SUV drenched in heavy rain. Distance shots showed them zooming along under blue skies with a mild shower sprinkling on them.

The SFX were the usual standard of Asylum films. Highlights included the cyclone catching fire from the burning rig and magma, then spraying Los Angeles with flaming hail. For no apparent reason, a reservoir dam failed, breaking apart into 8-byte chunks and flooding the Los Angeles basin.

Sparks had a plan that just might work and did. Something to do with silver iodide crystals fired into the cyclone by an F-16 fighter. There was some common sense in one scene though. The FEMA bureaucrat wanted the city evacuated. The colonel pointed out that moving 6 million people out of the basin in a few hours was a physical impossibility.

The alarums and excursions were too tedious to list in detail. I did a lot of fast-forwarding. This movie should not be viewed sober. Unfortunately I am a teetotaler. I suggest making it a drinking game. Every time Sparks shouts "*Stop the car!*" or "*Look out for that tree!*", chug a can of beer or a shot of vodka.

GEOSTORM was a 2017 movie that had top-quality SFX but a script that would not have been out of place in an Asylum studio. The script was written by Dean Devlin and Paul Guyot and opened with a tedious narration about how climate change had destroyed cities around the world in 2019.

The following year, the nations of the world united peacefully to solve the crisis. Just like the pandemic that never happened in this timeline, except that everyone worked for a common good without any selfishness or bickering. So as you can see, this is real science fiction.

The solution was to build a massive network of satellites to control the weather. The satellites beamed down heat rays or, something that defied science, cold rays that could freeze the air on contact. All was blue skies until the system began malfunctioning. A massive planet-spanning storm system meant the end was nigh.

The man of the hour was Jake Lawson, designer of the system. After conflicts with politicians, he was replaced by his brother Max, who was more diplomatic. Eventually the brothers learned the satellites had been sabotaged by a computer virus. A conspiracy destroyed cities around the world with targeted attacks by satellites

A conspiracy directed by the American Secretary of State was destroying cities around the world with targeted attacks by satellites. Jake and Max raced to save the world. After many alarums and excursions into space, they succeeded in stopping the geostorm.

The command-and-control centre had the usual warboard map showing the planet. Most of it was covered in red to indicate the extent of the geostorm, but the Canadian prairies and the American Great Plains states were clear of any storms. Another good reason to live in Alberta.

The SFX were technically excellent but some were out of date in concept. As an example, Lawson went into space on a NASA space shuttle that was obsolete even as the movie was being made, the kind with the big tank and two boosters. Evidently Elon Musk failed to get the contract. It would have cost no extra to simulate reusable spacecraft instead of the obsolete style.

An unbelievable scene was when the space station controlling the satellites had its computers activated and its self-destruct sequence activated. In the first instance, there was no logic in the station have a self-destruct sequence, or secondly, that the sequence couldn't be cancelled by hitting a red button. Straight out of Star Trek, that was.

Down on the planet, there were car chases. This was an era of electric cars but when they crashed, no air bags deployed. Just as the Star Trek universe had forgotten what seat belts were, so it was that air bags were gone. When electric cars crashed, they blew up like a gasoline tank. Perhaps Musk did get the contract after all.

The pacing of the movie was awkward, with action scenes and SFX interrupted by scenes that looked like the serious moments in a rom-com. The characters were often unreasonably harsh toward each other without provocation, as if they were part of a dysfunctional family. The plot was predictable, a melange of every disaster movie and espionage action-adventure movie you've ever seen. It was a standard conspiracy movie, mitigated by the superb SFX.

PHILATELIC FICTION: PART 3

by Dale Speirs

[Parts 1 to 2 appeared in OPUNTIA #417 and 479.]

Stamping Out Fiction.

"Too Many Clients" by D.B. McCandless (1937-03-27, DETECTIVE FICTION WEEKLY, available as a free pdf from www.archive.org) was about a loudmouthed private detective named Sarah Watson. She barged into the theft of a rare stamp worth $30,000 (call it $300,000 in today's depreciated currency).

The owner of the stamp Theodore Barnes feuded with his brother Sylvester, also a philatelist, over the stamp. He cheated his stepsister out of money in order to buy the stamp. He mortgaged the family mansion for stamps. In short, a genuine stamp collector. It wasn't him that was murdered though, although the victim left for the next world in his mansion with a knife. Watson barged around investigating. The police? What of them? She was hoping for a

commission from the insurance company to recover the stamp, plus reward money from others.

Theodore had to sell the stamp to Sylvester or be financially ruined. He did not want to part with the stamp so he hired a burglar to steal it, then silenced him with a knife. The idea was that Theodore would have both the stamp and the insurance money.

Using flimsy evidence, none of which would hold up in court, Watson solved the case. She stole evidence from the corpse, which would be obstruction of justice against her. Theodore was tripped up in a remark based on her withholding of evidence, so that would have the case thrown out of court.

The 1960s television series BATMAN was played as a mixture of melodrama, comedy, and slapstick, basically the only way that superheroes can be played. The idea of masked vigilantes barging into police or military work is risible, much less that they would long remain anonymous or their secret headquarters unknown.

"A Piece Of The Action" and "Batman's Satisfaction" were a two-part episode aired in 1967 March, written by Charles Hoffman. The supervillain was Colonel Gumm, working undercover as the foreman of a trading stamps print shop. Gumm was played by Roger C. Carmel, best remembered as Harry Mudd in the original Star Trek series.

The episode began not with Batman and Robin but the Green Hornet and Kato. This was a crossover from the latter's television series, produced by the same studio. The green duo were out of their territory, as they did not live in Gotham City.

The venue was the Pink Chips Stamp Factory, where trading stamps were produced. Col. Gumm and his henchmen Reprint, Cancelled, and Block clashed with the Green Hornet and Kato. The encounter was indecisive.

The next morning the factory owner Miss Pinky Pinkston called the police about the intrusion. She knew nothing about what Gumm was doing on the side, using the factory printing press and perforator to create forgeries of rare stamps.

Jump cut to the stately manor of Bruce Wayne, the man behind the mask of Batman, where he and his youthful ward Dick Grayson were examining their stamp collection. Wayne had just purchased a rare stamp called the Blue Boar of Russian Samara, but was having second thoughts about it. He wondered if it might be a forgery.

Britt Reid, the man behind the Green Hornet mask, was in town for a convention. He looked up Wayne, an old schoolboy friend, and the two met on a dinner date with Pinkston. Neither man knew about the other's secret identity. Both were competing for Pinkston, who was not only a fair maiden but rich.

En route through the episode there were assorted alarums and many excursions across Gotham City. Gumm managed to capture all four crime fighters. Instead of first ripping their masks off and learning their identities, he tried feeding them into a perforating machine. Didn't work.

Pinkston discovered Gumm's plan, for which he took her hostage and squirreled her away in a back room of the factory. In the meantime, he had other problems. Gumm had an alternate identity as a stamp dealer named Boris Sevaroff, through which he sold his forged stamps. When Wayne visited his stamp shop to question the authenticity of the Blue Boar stamp, Sevaroff had to do some fast talking.

Gumm's ultimate plan was to heist the International Stamps Exhibition. Obviously the scriptwriter had never been to a stamp show, much less an international. This so-called international was in one small hotel function room. Gotham City was an alternative New York City. The last international stamp exhibition in NYC, held in 2016, took up the entire Jacob K. Javits Convention Center.

Philatelic exhibit frames hold 16 album pages on a side. In the episode, the exhibits consisted of 8.5 x 11 picture frames set out on a few tables, with a few stamps mounted in each. Further, the judging consisted of picking out the most valuable stamp, a complete violation of standard stamp show rules. Philatelic exhibits are judged on how well they tell a story about a stamp's history or its use in the postal system. The rules everywhere forbid mentioning the price of a stamp.

That was all moot anyway. A grand battle developed between the Gumm gang and the four masked crime fighters. Guess who won? The two pairs of heroes never learned who the others were.

Lost In The Mail.

DRAGNET hardly needs explaining. It set the standard for police procedurals, airing on radio from 1949 to 1957 before going to television and movies. The series established Jack Webb's reputation as a major player, both actor and producer. "*Just the facts, ma'am*" is attributed to him. He never said it in the show but did use similar phrases. The episodes were based on true cases of the Los Angeles Police Department, with the names changed to protect the innocent.

"The Big Mailman" aired on 1951-05-24. It is available as a free mp3 from www.archive.org The episode began with Los Angeles plagued by a mail thief who stole cheques and bank statements, then wrote forged cheques. Postal Inspector Smith asked LAPD for help. Sgt Joe Friday was assigned to the case.

The opening segment involved one of the detectives having trouble with a new raincoat. After that padding, the middle third of the episode was an extended conversation between Smith and the police officers about how mail thieves operated. If they could get a master key to a letter carrier's deposit box, then they could steal mail.

The problem was that if mail went missing, it would be at least a week before the recipients made enquiries. During that time the thief could pass cheques, which in turn wouldn't show up until next month's bank statement. That was more than enough time for a thief to paper a town with forged cheques.

By the time the officers ran out of things to talk about, a call came in that a suspect had been arrested. They interrogated him but had trouble pinning him down. He admitted one stolen cheque for $57. The officers agreed he wasn't the one.

The search continued. Friday and fellow officers trudged through routine investigative work such as handwriting analysis, checking names in telephone directories, and M.O. records. They finally got a good suspect named Philip Holloway.

That led to surveillance stakeouts, trailing him into a bank, and nabbing him in the act. He had made a copy of a master key, and told Friday he could do it for any key. As Friday put handcuffs on him, he replied there was one set Holloway wasn't going to duplicate.

THE OTHER INVISIBLE MEN: PART 6
by Dale Speirs

[Parts 1 to 5 appeared in OPUNTIAs #262, 360, 379, 449, and 473.]

"The Invisible Raiders" by Ed Earl Repp (1929 October, AIR WONDER STORIES, available as a free pdf from www.archive.org) was an action-adventure about invisible aircraft raiding bigger aircraft in midair. The hero had a deuce of a time going up against an enemy he couldn't see.

Prof. Martin Standish had a plan. He believed the invisibility device used by the bandits had been stolen from a Chinese scientist, to be used for nefarious purposes. A partial text of the handwaving explanation was:

Every physicist is aware that the infra-red offers the lowest vibrations of light which the human visual organs are able to perceive as I have said. That is the extremely deep shade of red which vibrates at the almost inconceivable rate of 400 trillions per second. Below that the retina is unable to distinguish objects or motion of any kind.

In my opinion the Oriental succeeded in reducing the vibrations of the infra-red below the lowest frequencies of radiation to which the human eye is adapted thus rendering the retina incapable of perceiving objects in contact with such vibration.

In order to create the lower vibrations he must have found even a deeper shade of red in the infra-red spectrum than the deepest hitherto known. This shade of red was probably reproduced in some sort of a material chemical which the scientist subjected to high frequency energy to cause a vibration within it.

Results were that a sort of a lacquer involving the infra-red principle was created. How it was actually performed, we do not know, but objects applied with the hypothetical chemical charged with high frequency oscillation were rendered invisible.

And so on with the gibberish. You get the idea. The Professor had a device which could be fitted to fighter planes and emit a anti-infrared ray to make the raiders visible. The rest was details.

"The Super Velocitor" by S.G. Carpenter (1929 December, SCIENCE WONDER STORIES, available as a free pdf from www.archive.org) was about a gang of train robbers who attacked mail cars on various trains. They were never seen but hit so fast that the stolen registered mail seemed to vanish into thin air.

Detective Crane was given the job. He arranged for a package of fake currency to be placed in the mail car, then watched it vanish en route before his astonished eyes. The currency was marked and a suspect was soon picked up trying to pass some of the bills.

That led to the mastermind, who had invented a superscience suit that enabled the wearer to travel so fast as to be invisible. Conversely, outside the suit, moving objects such as trains or automobiles slowed down and appeared to be stopped. The gang wore the suits to the railroad track, waited for the train to approach, then activated their suits.

The train then became motionless to them, even though to the outside world it was still roaring along the track. They climbed on board, helped themselves to the loot, and walked off. Crane managed to infiltrate the gang, and the rest of the plot was obvious.

"The Radiant Shell" by Paul Ernst (1932 January, ASTOUNDING, available as a free pdf from www.archive.org) began with an enemy nation of the USA stealing the plans for a death ray that would enable them to rule the world.

Not to worry though, as a young scientist named Thorn Winter had a plan. Winter had perfected a method of making himself invisible, and proposed to stroll into the enemy embassy and steal the plans before they could be taken back to their country for construction. He painted himself with the invisibility chemical.

There were problems, such as dust clinging to him and making his legs visible, so he had to stop and brush himself off. More seriously, a guard dog detected his scent and created a fuss. Fortunately Winter was standing next to a buffet, so the dog handler hauled the beast out of the room on the assumption the animal was after the food.

The next difficulty was that an enemy agent looking directly at him noticed the edge of the buffet table zigzagged slightly at the spot where Winter was standing. The invisibility film covering him refracted the light, enough to be noticed by an observant man. Winter moved aside and realized he could only stand against blank walls.

What gave him away completely was that he sneezed. Thereafter it was one thing after another. The room was sealed. Embassy staff who had ceremonial swords began using them in a more practical manner, forming a line abreast and sweeping the swords back and forth. Winter managed to evade them initially but then someone notice his footprints in the deep carpet.

They almost got him, wounding him enough that blood marked his shoulder. A few more alarums and confusions but Winter had a head start, grabbed the plans for the death ray, and managed to escape with a single bound. That part didn't seem as plausible as the invisibility chemical.

"Beyond The Spectrum" by Arthur Leo Zagat (1934 August, ASTOUNDING) was about the troubles in Florida when a water well driller hit a tunnel. An artificial tunnel, but no sign of those who made it. Many alarums and excursions both below ground and on the surface. Eventually the critters responsible were discovered and dynamited.

They had been invisible because their skin refracted light around them to the other side of their bodies: *The secret of their invisibility lay in their epidermis, corresponding to our skin. This refracted all the light between ultra-violet and infra-red, the spectrum by which we humans see, carried it clear around them so that to our eyes they appeared perfectly transparent.*

As the narrator explained in the final infodump, once the monsters had been destroyed: "*They are, of course, absolutely blind to our light. But remember sunlight never reaches them in their underground home. It is ultra-violet light, and other vibrations beyond our spectrum, emitted by radio-active substances in the rotting rock that pervade that region. Utterly black to us, they see by it as perfectly as we do by the light of the sun.*"

Who Knows What Evil Lurks?

One of the most popular old-time radio series was THE SHADOW. The radio series had a complicated genealogy that began in 1930 and didn't evolve the familiar version of The Shadow until 1933. Episodes are available as free mp3s from the Old Time Radio Researchers at www.otrrlibrary.org The series

lasted until 1954. Like the print stories, no real-name credit was given to writers. Sometimes a house name was credited, but usually nothing was said in the closing credits about who the writer was.

The Shadow, as the opening blurb put it, was in reality Lamont Cranston, wealthy young man about town. He had traveled to Tibet where he learned how to cloud minds so that people could not see him, only hear him. His voice also changed when he became invisible, courtesy of switching to a crystal microphone. He always announced himself as The Shadow with maniacal laughter.

The lovely Margo Lane was the only one who knew his real identity. Her main functions were to scream every time she saw a corpse, be frequently kidnapped or trapped with a killer, and to have the loose threads explained to her in the denouement.

The Shadow began as a narrator on a radio show. He then became a character in his own right and spawned a monthly magazine, followed by books and movies. There was no continuity between his appearances in different media. In the movies, for example, he was a middle-aged radio reporter who used The Shadow name as the title of his show but was known to his coworkers by his real name.

"The Little Man Who Wasn't There" aired on 1945-04-08. The episode opened with a montage of thefts by an invisible thief who each time dropped a calling card "*Compliments of the little man who wasn't there*".

He snatched jewels from necklaces and broaches off the necks of dowagers and took $10,000 in bearer bonds out of a jacket pocket of a stock broker. The three victims claimed they felt him but did not see him. All the thefts took place as the victims were descending staircases in public view. Lamont Cranston and Margo Lane witnessed the thefts.

Commissioner Weston was convinced The Shadow was pulling the jobs since he was the only invisible man he knew. Cranston and Lane went investigating to clear The Shadow's name. The victims had nothing in common, save they were all claiming insurance via the same agent Gabriel Hodge. He told Cranston that he noticed something interesting about the thefts. Before he could say what, he was shot dead sitting in his office. Cranston and Lane saw nothing. Searching about, Cranston noticed something had gone out Hodge's office window and landed down below. It was a 55-calibre handgun that had kicked back through the window from the recoil. Yes, 55, not the always popular 45. Even Weston didn't believe that part, but Cranston identified it as an antique gun. It had been rigged to be fired by remote control.

The Shadow visited the three victims. He arranged a J'accuse! meeting with them at midnight in the opera house. The thefts had never happened but were part of an insurance fraud by the three victims working with Hodge. They silenced him so they wouldn't have to share the proceeds. Weston watched from hiding, then moved into action. The Shadow's name was cleared.

The 1960s television series BATMAN was played as a mixture of melodrama, comedy, and slapstick, basically the only way that superheroes can be played. The idea of masked vigilantes barging into police or military work is risible, much less that they would long remain anonymous or their secret headquarters unknown.

"The Entrancing Dr Cassandra" was written by Stanley Ralph Ross and aired on 1968-03-07, the penultimate episode before the series was cancelled. Supervillain Cassandra and her husband Cabala robbed banks by taking a superscience camouflage pill that made them invisible. Once they funded their operations with the loot, they used the pills to free six other supervillains.

The logic behind the pills didn't make sense. Cassandra and Cabala would take the pills and instantly become invisible. Assuming the chemical was as fast as nitroglycerine tablets that heart patients take, it still couldn't turn their clothes invisible.

Batman and Robin had trouble in the traditional punch-up because all the supervillains took the pills. However, Batman cleverly equalized the dispute by turning off the lights. In a pitch-black room, all were equal. If the invisible being was rendered unconscious, the pill stopped working and the person became visible. The logic of the pills completely escaped me. That's Hollywood for you.

WHATEVER HAPPENED TO NIKITA? PART 4
by Dale Speirs

[Parts 1 to 3 appeared in OPUNTIA #416, 468, and 480.]

Atomic Panic.

"Descent" by Richard Matheson (1954 May, WORLDS OF IF, available as a free pdf from www.archive.org) was a mood piece about a family preparing to join thousands of others in an underground city as nuclear war became imminent. The parents had to explain to children too young to understand, the old folks figured they'd just as soon die aboveground, and the traffic to the shelters was horrendous. A vignette more than a story.

MATINEE was a 1993 movie written by Charles S. Haas and Jericho Stone, available on DVD. It was mainly a comedy but intersected with the Cuban missile crisis and the effect it had on Americans as Nikita Khrushchev and John Kennedy almost started a nuclear war.

Set in Key West, Florida, the protagonists were a young teenager Gene Loomis and a B-movie producer Lawrence Woolsey, who came to town to premiere his latest flick MANT. That was actually a movie within a movie, and perfectly parodied the 1950s monster movies. The Mant was a man who was bitten by a radioactive ant and turned into a giant ant terrorizing the townsfolk.

Just as Woolsey arrived, the Cuban missile crisis began. The citizens of Key West, as no doubt other Americans, rushed the supermarkets and fought each other for bottled water and dry foods. Toilet paper was at par with gold. I'm glad that sort of thing doesn't happen anymore.

The theatre owner where the premiere was taking place had just finished his own personal bomb shelter in the basement. He practiced how fast he could run to it and timed himself with a stopwatch. Meanwhile, Woolsey installed what he called Rumble-Rama special effects in the theatre, which was to shake the auditorium and provide electrical shocks to the audience.

Loomis had high school romances, but was preoccupied because his father was serving on board a submarine enforcing the Cuban blockade. To him the movies offered escape, and he looked forward to MANT.

The current flick at the theatre was THE SHOOK-UP SHOPPING CART, a perfect parody of Disney films of the 1960s. A man had been reincarnated as a shopping cart and set about protecting his family and disrupting the machinations of criminals. Those of us who grew up in the 1960s and had to watch those movies for lack of anything better will understand this parody more than later generations.

For the citizens of Key West the crisis wasn't just something on the television newscasts. The military set up posts on the beaches and helicopters thundered continuously on patrol just offshore. Everyone was hysterical. The movie premiere shook down part of the theatre and sent the panicked audience screaming out into the street, convinced an atomic bomb had hit their city. It was a well-done mixture of pathos and comedy.

For the teenagers, the crisis came at an impressionable time. One can easily spot those who would be Vietnam War protestors five years later, the ones who would live in fear of the draft, and the gung-ho patriots who wouldn't return from Vietnam or, worse yet, came back maimed.

The nuclear war panic wasn't as intense in Canada. We never had duck-and-cover exercises in Alberta schools where I grew up. The Canadian government had established diplomatic relations with Cuba and didn't fear them like the Americans. This movie, while spoofing science fiction, illuminated the fear of atomic warfare.

Radiation Side Effects.

From the 1950s to present date, hundreds if not thousands of movies and television episodes were based on the premise that radiation exposure would produce mutants, be they giant ants or X-men. In real life, it almost goes without saying, no human has been able to do what a spider can just because they were bitten by a radioactive spider. Instead, you get cancer.

Some variations on this premise were slightly more interesting. "Breeder Reaction" by Winston Marks (1954 April, WORLDS OF IF, available as a free pdf from www.archive.org) involved the use of supposedly safe radioactive dust in women's cosmetics to make their skin glow.

The story was told from the point of view of an adman working for a cosmetics client. The makeup and lipsticks did in fact clear up complexions and give

women a glowing look. It also made them parthenogenetic. When single women, chaste and pure, found themselves pregnant, the trouble began. It got worse. Some of the products were shampoos and skin cleansers for men. They also became pregnant.

THE BEAST OF YUCCA FLATS was a 1961 black-and-white movie written and directed by Coleman Francis. Often considered one of the worst sci-fi movies ever made, it was produced on a high-school play budget. It is available from Mill Creek Entertainment on their "Horror Classics" 50-movie DVD boxed set.

The film was mostly narrated because the producers couldn't afford a sound crew on location. The character voices were only heard when they were facing away from the camera, and everything was dubbed in the editing room. A few flashes of female nudity were added in the hopes of spicing up the movie but today you can see more skin on television.

Location filming was done in California but the movie was set at Yucca Flat, Nevada ('Flats' in the movie). The real Yucca Flat is the most bombed nuclear test site in the world, with 827 detonations. The land was officially designated a National Sacrifice Zone because it is impossible to clean it up.

The acting was bad, the voices were flat, and the car chase was laughable. Secret agents, for example, held their guns out as if they were taking a selfie. At least the atomic bomb stock shots weren't the Bikini Atoll bomb but genuine desert detonations.

There was one very realistic aspect of the gun battles seldom seen in any other movie, good or bad. The agents on both sides fired revolvers during their battle but had to stop every 30 seconds to reload another six rounds. Not like other movies where gunmen get 20 or 30 shots from a revolver, or 1,000 from a submachine gun without the barrel melting down.

The plot began with Dr Joseph Javorsky defecting from the Soviet Union with military secrets. His plane landed at Yucca Flat(s), which was peculiar because the USAF would not accept anyone's plane landing in the middle of their nuclear weapons test site. Swedish wrestler Tor Johnson, best remembered for his part in PLAN 9 FROM OUTER SPACE, played Javorsky. For the two people reading this who have never seen his photo, he was a huge man 1.9 metres tall and 200 kg. He played monsters for obvious reasons.

Upon arrival the Javorsky party were ambushed by Soviet agents who wanted his briefcase and him dead. The car chase, such as it was, led into the heart of the bomb range. The gun battle abruptly terminated when an atomic bomb was detonated nearby and everyone was crispy-fried except Javorsky.

By a fluke, he survived but was heavily exposed to the radiation. This turned him into a raving monster which killed for the sake of killing. The rest of the plot was predictable. A posse was organized, two cute little kids got into the danger zone, and The Beast waddled through the gullies and flats.

He died, as was expected. There was an interesting twist at the end, completely ad-libbed. As The Beast lay on the ground dying, a jackrabbit unexpectedly hopped into the camera scene and sniffed around him. Johnson slowly moved his arm and was able to pet the animal before it headed back into the brush. A genuinely touching moment in a movie where nothing of the sort was expected.

Come Spy With Me.

YOURS TRULY, JOHNNY DOLLAR was the last of the old-time radio series, airing from 1949 to 1962. Almost all the OTR shows had died off by 1955. Johnny Dollar was an insurance investigator based in Hartford, Connecticut.

Each episode began with a claims adjustor from an insurance company ringing him up and asking him to take on a case. The running joke of this series was that Dollar shamelessly padded his expense account. Each scene was introduced by Dollar reciting a line item from his expense report, followed by a segue to the action.

"The Nuclear Goof Matter" was written and directed by Jack Johnstone, and aired on 1960-01-24 at the tail end of the Red Scare. The episode took place entirely in Hartford. It only took a few hours to solve, so Johnny Dollar couldn't claim any expenses, much to his frustration. He did get his usual commission from the insurance company that hired him.

Lloyd's of England rushed Dollar out to Nuclear Processors Inc after some radioactives were stolen. The insurance company had the liability policy on the company. One hopes they charged a high premium.

Dr Carlos Rayburn was in a tizzy because the thief was Romanoff, a Russian scientist without proper security clearance. Rayburn was cutting corners to

make a profit and since Romanoff had published some good papers, Rayburn hired him on the spot instead of going through channels.

The radioactive substances were subcritical and would explode after a few hours because they needed to be kept inside a magnetic field. Romanoff had been working in a different laboratory on a different project and wasn't aware about the magnetic field, so he just took the radioactives in a lead container.

Rayburn was in deep trouble several ways. He wanted Dollar to find Romanoff fast so that when the Feds were notified of the theft, Romanoff would already be in custody and the material safely returned. That should mitigate what the Feds would do to Rayburn. The episode then went to a commercial for 4-way cold tablets. The spokeswoman earnestly told listeners there was nothing worse than a stuffy head.

Dollar rushed off to Romanoff's apartment. As he was looking for a parking spot, his car hit a man carrying a briefcase. Very mortifying for both parties concerned, so Dollar hustled the stunned man into his car and took him to a hospital. He forgot about the briefcase and left it in the car's backseat.

Dumping the stranger in the emergency ward, Dollar then rushed (there's that verb again) back to Romanoff's apartment. This time he made it safely to the curb but upon forcing his way into the apartment, he was slugged unconscious.

That gave way to a commercial for a laxative. The spokesman earnestly told listeners there was nothing worse than a stuffed up colon.

Back at the apartment, Dollar was revived by the man who slugged him, a federal agent staking out the place. They discussed the matter rather calmly. The agent said the man Dollar hit with his car was Romanoff, who was now under guard in the hospital.

What they didn't have were the radioactives, which Romanoff had been carrying in a briefcase. Dollar solved that problem and the two men rushed, if I may use that phrase, the fissiles back to the laboratory.

Rayburn put the radioactives back under a magnetic field just in time, thereby allowing Dollar to continue investigating cases for two more years until the series was cancelled. All ended well, except for Romanoff and probably Rayburn.

LETTERS TO THE EDITOR

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

FROM: Lloyd Penney 2021-03-29
Etobicoke, Ontario

OPUNTIA #496: I am sure someone, possibly you, is putting together a display of COVID-19 postage for an upcoming show. If not you, possibly Derwin Mak in Toronto. Among many things, he is a passionate philatelist.

[I've never heard of him and he doesn't seem to be part of organized philately, but yes, there is a mad rush among stamp collectors to get the stamps and put together exhibits. It will be the hottest area of philately for years to come. The famous Austrian stamp printed on toilet paper cost me $25 but is now in the $50 range. If you are a stamp collector, don't hesitate. Most of the COVID-19 stamps had limited printings, and once soaked up into collections will be difficult to find.]

Arguing with anti-vaxxers? Not possible. They abnormally sure of their position; you're just trying to confuse them/the issue, or harass them for being right and you're not, or say the scientists were paid off or simply wrong. From what I have seen, the best way to deal with anti-vaxxers is to ignore them. They hate that most of all, being so certain of their rightness/righteousness.

[Ignoring them allows their falsehoods to spread. However, rather than directly tangle with them, the best policy is to publish rebuttals elsewhere while not naming the individuals or responding to them directly. I've said many times before that conspiracy theory is a branch of abnormal psychology.]

Re: Sherlockiana. We need to forget the depiction of Dr. John Watson as by Nigel Bruce, and keep thinking of the way Edward Hardwicke and David Burke played Watson with Jeremy Brett. Any doctor with a thriving practice, in any era, would not be a bumbling fool.

[The one good thing is that the younger generation seldom views black-and-white movies, so they will be unaware of Nigel Bruce. Modern movies and television shows are generally better in portraying Watson as a younger and intelligent man.]

OPUNTIA #497: Not even the CBC does drama on the radio any more. Some years ago, Yvonne and I went to an open house at the CBC main building in Toronto, where we explored most of the floors and sub-basements, and we saw the effects room, where sound effects could be generated for the dramas CBC Radio would work on. I think the last drama was AFGHANADA. Now, it's nothing but a fond memory. I would hope they might try it again for a while, and store other shows on gem.cbc.ca

The pandemic continues, as does the self-isolation, the masking, and governments saying they are listening to the scientists, but not really. All we can do is find things to do, hope the barber shops open soon, and look forward to the day when we can put the masks aside and mingle freely again. I don't think that will happen until 2022 at the earliest. In the meantime, fanzines like yours give me plenty to do, and think about. Thank you for these, and I will look for more.

[We are much more fortunate than those who lived through the 1918 pandemic in that we can now socialize at least partially via Zoom, zine archive Websites, or blogs.]

WORLD WIDE PARTY ON JUNE 21

Founded by Benoit Girard (Quebec) and Franz Miklis (Austria) in 1994, the World Wide Party is held on June 21st every year. 2021 will be the 28th year of the WWP.

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

At 21h00, face to the east and salute those who have already celebrated. Then face north, then south, and toast those in your time zone who are celebrating as you do. Finally, face west and raise a glass to those who will celebrate WWP in the next hour. Raise a glass, publish a one-shot, have a Zoom party, or do a mail art project for the WWP. Let me know how you celebrated the day.

SEEN IN THE LITERATURE

Cockell, C.S. (2021) **The biological study of lifeless worlds and environments.** ASTROBIOLOGY 21:doi.org/10.1089/ast.2020.2337

Author's abstract: *Astrobiology is focused on the study of life in the universe. However, lifeless planetary environments yield biological information on the variety of ways in which physical and chemical conditions in the universe preclude the possibility of the origin or persistence of life, and in turn this will help explain the distribution and abundance of life, or lack of it, in the universe.*

Furthermore, many places that humans wish to explore and settle in space are lifeless, and studying the fate of life in these environments will aid our own success in thriving in them.

In this synthetic review, I have three objectives, as follows:
(1) To discuss the biological value and use of lifeless environments,
(2) To explore the diverse planetary bodies and environments that can be lifeless and to categorize them, and
(3) To propose sets of biological experiments that can be undertaken in different categories of lifeless worlds and environments and suggest concepts for mission ideas to realize these goals.

They include origin of life and microbial inoculation experiments in lifeless but habitable environments. I suggest that the biological study of lifelessness is an underappreciated area in planetary sciences.

Chacon-Baca, E., et al (2021) **Acid mine drainage as energizing microbial niches for the formation of iron stromatolites: The Tintillo River in southwest Spain.** ASTROBIOLOGY 21:doi.org/10.1089/ast.2019.2164

Authors' abstract: *The Iberian Pyrite Belt in southwest Spain hosts some of the largest and diverse extreme acidic environments with textural variation across rapidly changing biogeochemical gradients at multiple scales.*

After almost three decades of studies, mostly focused on molecular evolution and metagenomics, there is an increasing awareness of the multidisciplinary potential of these types of settings, especially for astrobiology.

Since modern automatized exploration on extraterrestrial surfaces is essentially based on the morphological recognition of biosignatures, a macroscopic characterization of such sedimentary extreme environments and how they look is crucial to identify life properties, but it is a perspective that most molecular approaches frequently miss. Although acid mine drainage (AMD) systems are toxic and contaminated, they offer at the same time the bioengineering tools for natural remediation strategies.

This work presents a bio-sedimentological characterization of the clastic iron stromatolites in the Tintillo river. They occur as laminated terraced iron formations that are the most distinctive sedimentary facies at the Tintillo river, which is polluted by AMD. Iron stromatolites originate from fluvial abiotic factors that interact with biological zonation.

The authigenic precipitation of schwertmannite and jarosite results from microbial-mineral interactions between mineral and organic matrices. The Tintillo iron stromatolites are composed of bacterial filaments and diatoms as Nitzschia aurariae, Pinnularia aljustrelica, Stauroneis kriegeri, and Fragilaria sp.

Furthermore, the active biosorption and bioleaching of sulfur are suggested by the black and white coloration of microbial filaments inside stromatolites. AMD systems are hazardous due to physical, chemical, and biological agents, but they also provide biogeochemical sources with which to infer past geochemical conditions on Earth and inform exploration efforts on extraterrestrial surfaces in the future.

Van Ginneken, M., et al (2021) **A large meteoritic event over Antarctica ca. 430 ka ago inferred from chondritic spherules from the Sør Rondane Mountains.** SCIENCE ADVANCES 7:doi.org/10.1126/sciadv.abc1008 (available as a free pdf)

Authors' abstract: *Large airbursts, the most frequent hazardous impact events, are estimated to occur orders of magnitude more frequently than crater-forming impacts. However, finding traces of these events is impeded by the difficulty of identifying them in the recent geological record.*

Here, we describe condensation spherules found on top of Walnumfjellet in the Sør Rondane Mountains, Antarctica. Affinities with similar spherules found in EPICA Dome C and Dome Fuji ice cores suggest that these particles were produced during a single-asteroid impact ca. 430 thousand years (ka) ago.

The lack of a confirmed crater on the Antarctic ice sheet and geochemical and ^{18}O-poor oxygen isotope signatures allow us to hypothesize that the impact particles result from a touchdown event, in which a projectile vapor jet interacts with the Antarctic ice sheet. Numerical models support a touchdown scenario. This study has implications for the identification and inventory of large cosmic events on Earth.

Wu, Y., and D. Fu (2021) **New anomalocaridids (Panarthropoda: Radiodonta) from the lower Cambrian Chengjiang Lagerstätte: Biostratigraphic and paleobiogeographic implications.** PALAEOGEOGRAPHY, PALAEOCLIMATOLOGY, PALAEOECOLOGY 569:doi.org/10.1016/j.palaeo.2021.110333

[The Cambrian era was 542.0 to 488.3 megayears ago when multicellular life suddenly bloomed into countless new species.]

Authors' abstract: *Radiodonts are a morphologically and ecologically diverse clade of stem-group euarthropods that occupied numerous ecological niches in early animal ecosystems. Many Cambrian taxa are considered apex predators, primarily due to the possession of raptorial frontal appendage, though sweep and filter-feeding examples were also prevalent.*

Four major families have been distinguished including Anomalocarididae, whose elongate appendages consist of a series of podomeres bearing short endites. Studies of anomalocaridids have seen limited investigation in the Chengjiang Lagerstätte (Cambrian Stage 3) of China, despite the deposit being well-known for the diverse radiodont assemblage, and recently the putative anomalocaridid 'Anomalocaris' saron was reassigned to Tamisiocarididae.

Here we present exceptionally preserved specimens of two new anomalocaridid taxa from Chengjiang. Lenisicaris lupata gen. et sp. nov. represents the first valid Chengjiang anomalocaridid taxon, characterized by bearing short endites lacking auxiliary spines on almost all its podomeres.

A second taxon, Anomalocaris cf. canadensis Whiteaves, 1892, indicates a broad geographical range for this famous Burgess Shale species. With the help

of this new information, we show that the family Anomalocarididae was widespread at low latitudes from Cambrian Stage 4 to the Guzhangian.

The biogeographical patterns of anomalocaridids suggest a high dispersal capability in the larval form of anomalocaridids, and possible climatic control on their distribution. Furthermore, the known distribution of anomalocaridids in the well-documented soft-bodied biotas indicates that anomalocaridids were likely adapted to a broad spectrum of environments.

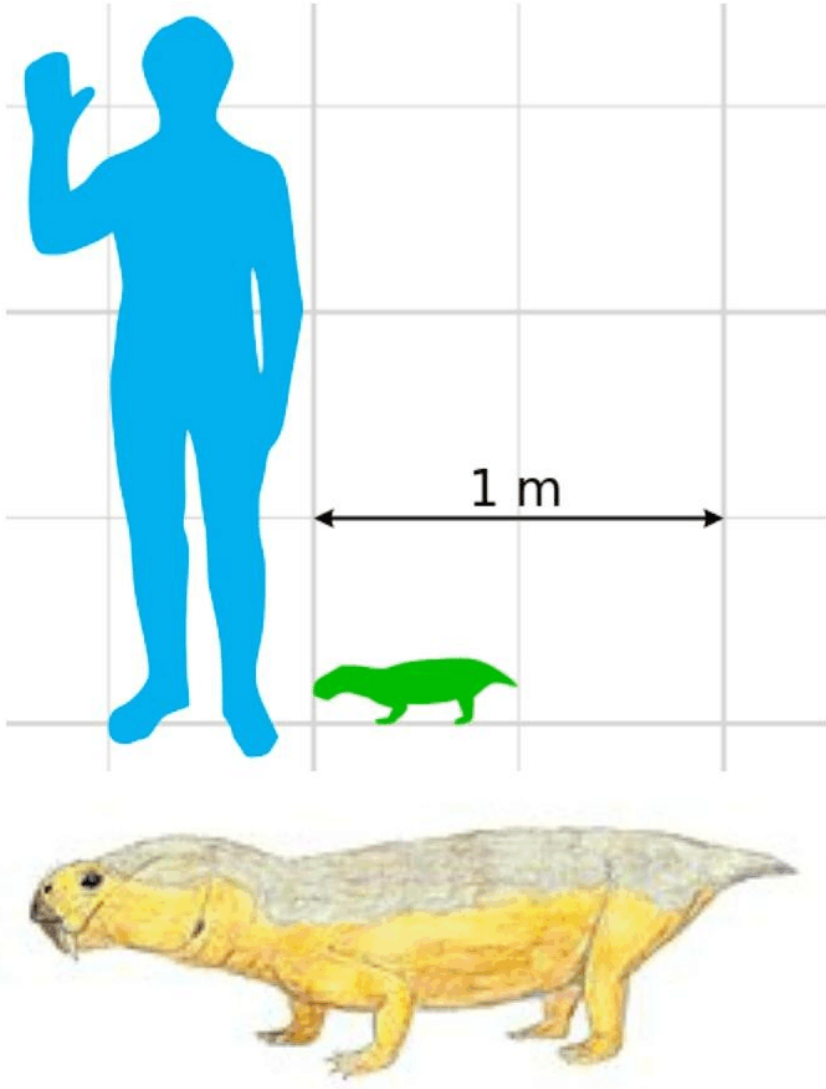
[Image is from this paper.]

Smith, R.M.H., and V. Fernandez (2021) **Neonate aggregation in the Permian dicynodont Diictodon (Therapsida, Anomodontia): Evidence for a reproductive function for burrows?** PALAEOGEOGRAPHY, PALAEOCLIMATOLOGY, PALAEOECOLOGY 569:doi.org/10.1016/j.palaeo.2021.110311

[The end-Permian 251 megayears ago was the greatest mass extinction ever recorded, when 97% of all species became extinct due to overheating of the planet by massive lava floods kilometres thick, covering Siberia and India. Vertebrates which survived were mostly small burrowing animals such as *Diictodon* which could dig down away from the daytime heat.]

Authors' abstract: *In the late 1980s the discovery of late Permian helical burrow casts containing articulated skeletons of the small herbivorous therapsid Diictodon feliceps led to conjecture that they may have been used for oviposition/parturition and shelter for infants. Here we present new fossil evidence in support of this interpretation and discuss the possibility that some of the burrows were specially excavated as brood chambers.*

A re-investigation of the original helical burrow site recovered several more burrow casts containing scattered yet still-associated skeletons of Diictodon. Mechanical preparation of a complete terminal chamber revealed a disarticulated but anatomically-associated adult Diictodon skeleton along with a single tiny (5 mm long) humerus of an infant dicynodont.



[Image was from Wikipedia.]

Nearby outcrops yielded a second association of an adult Diictodon skull (skull length 93 mm) on top of a tiny semiarticulated Diictodon skull and skeleton (skull length 19 mm) with a second infant mandible and a skeleton of the gracile therocephalian Ictidosuchoides longiceps. Synchrotron imaging of this putative burrow-fill confirmed that the humeral morphology of the infant skeleton closely matches the tiny humerus in the unequivocal burrow cast.

The common occurrence of Diictodon remains within the casts, combined with their specialized limbs for digging and histological data that indicates uninterrupted growth to ca. 70% of adult size, strongly suggests that they dug underground primarily for thermo-regulation.

Moreover, our new fossil evidence of behaviourally-associated neonate and adult Diictodon within these structures indicates that the terminal portions of underground burrows were facultatively used as brood chambers.

Karakostis, F.A., et al (2021) **Biomechanics of the human thumb and the evolution of dexterity.** CURRENT BIOLOGY 31:1317-1325 (available as a free pdf)

Authors' abstract: *Systematic tool production and use is one of humanity's defining characteristics, possibly originating as early as >3 million years ago. Although heightened manual dexterity is considered to be intrinsically intertwined with tool use and manufacture, and critical for human evolution, its role in the emergence of early culture remains unclear.*

Most previous research on this question exclusively relied on direct morphological comparisons between early hominin and modern human skeletal elements, assuming that the degree of a species' dexterity depends on its similarity with the modern human form.

Here, we develop a new approach to investigate the efficiency of thumb opposition, a fundamental component of manual dexterity, in several species of fossil hominins.

Our work for the first time takes into account soft tissue as well as bone anatomy, integrating virtual modeling of musculus opponens pollicis and its interaction with three-dimensional bone shape form.

Results indicate that a fundamental aspect of efficient thumb opposition appeared approximately 2 million years ago, possibly associated with our own genus Homo, and did not characterize Australopithecus, the earliest proposed stone tool maker.

This was true also of the late Australopithecus species, Australopithecus sediba, previously found to exhibit human-like thumb proportions. In contrast, later Homo species, including the small-brained Homo naledi, show high levels of thumb opposition dexterity, highlighting the increasing importance of cultural processes and manual dexterity in later human evolution.

Smith, E.A., et al (2021) **Ecological variation and institutionalized inequality in hunter-gatherer societies.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 118:doi.org/10.1073/pnas.2016134118

Authors' abstract: *Persistent differences in wealth and power are pervasive in contemporary societies, yet were absent or muted for most of human history. To help explain how and why institutionalized hierarchy can arise in egalitarian systems, we examine a sample of Native American hunting and gathering societies that vary in the degree of inequality.*

Systematic evaluation of alternative hypotheses identifies the presence of defensible clumped resources that can be monopolized as a likely determinant of institutionalized hierarchy. When such resources are present, societies in our study exhibit substantial inequality, including slavery.

Other possible predictors, such as population pressure and warfare, do not show this effect. These results suggest general factors likely facilitate the initial emergence of inequality in human societies.

Research examining institutionalized hierarchy tends to focus on chiefdoms and states, while its emergence among small-scale societies remains poorly understood. Here, we test multiple hypotheses for institutionalized hierarchy, using environmental and social data on 89 hunter-gatherer societies along the Pacific coast of North America.

We utilize statistical models capable of identifying the main correlates of sustained political and economic inequality, while controlling for historical and

spatial dependence. Our results indicate that the most important predictors relate to spatiotemporal distribution of resources.

Specifically, higher reliance on and ownership of clumped aquatic (primarily salmon) versus wild plant resources is associated with greater political-economic inequality, measuring the latter as a composite of internal social ranking, unequal access to food resources, and presence of slavery. Variables indexing population pressure, scalar stress, and intergroup conflict exhibit little or no correlation with variation in inequality.

These results are consistent with models positing that hierarchy will emerge when individuals or coalitions (e.g., kin groups) control access to economically defensible, highly clumped resource patches, and use this control to extract benefits from subordinates, such as productive labor and political allegiance in a patron-client system.

This evolutionary ecological explanation might illuminate how and why institutionalized hierarchy emerges among many small-scale societies.

Albizuri, S., et al (2021) **Dogs that ate plants: Changes in the canine diet during the Late Bronze Age and the First Iron Age in the northeast Iberian Peninsula.** JOURNAL OF WORLD PREHISTORY 34:75-119

Authors' abstract: *We studied 36 dogs (Canis familiaris) from the Can Roqueta site in the Catalan pre-littoral depression (Barcelona), dated between the Late Bronze Age and the First Iron Age (1300 and 550 cal BC). We used a sample of 27 specimens to analyse the evolution of the dogs' diet based on the carbon delta13C and nitrogen delta15N isotope composition.*

The results show a marked human influence in that these natural carnivores display a highly plant-based diet. The offset between canids and herbivorous ungulates does not reach the minimum established for a trophic level, which implies an input of C3 and C4 (millet) cultivated plants. Moreover, the homogeneity in the values indicates that humans prepared their dogs' food.

Jun, T., and R. Sethi (2021) **Extreme weather events and military conflict over seven centuries in ancient Korea.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 118:doi.org/10.1073/pnas.2021976118

Authors' abstract: *We explore the causal connection between weather and war by constructing and analyzing a dataset featuring extreme weather events and military conflicts involving a set of stable political entities that existed side by side over several centuries, namely, the three ancient kingdoms of the Korean Peninsula between 18 Before the Common Era and 660 Common Era.*

Conflicts are classified as desperate if a state experiencing the shock invades a neighbor and opportunistic if a state experiencing the shock is invaded by a neighbor. We find that weather-induced conflict was significant, but largely opportunistic rather than desperate. That is, states experiencing an adverse shock were more likely to be invaded, but not more likely to initiate attack.

We also provide evidence that the channel through which weather shocks gave rise to opportunistic invasions was food insecurity, which weakened the power of states to repel attack. Since climate change is projected to give rise to an increased frequency of extreme weather events, these historical findings have contemporary relevance.

Friedman, H.H. (2021) **Is higher education making students dumb and dumber?** AMERICAN JOURNAL OF ECONOMICS AND SOCIOLOGY 80:doi.org/10.1111/ajes.12372

Author's abstract: *This article examines what colleges and universities have to do if they wish to remain relevant. Many students graduating college today lack critical thinking skills. One reason for this is that academic faculty themselves lack some important skills, which include: 1) an appreciation of uncertainty; 2) respect for other disciplines; and 3) an understanding of what true diversity is all about. All of these require humility, which is not valued enough in academe.*

Tajmar, M., et al (2021) **High-accuracy thrust measurements of the EMdrive and elimination of false-positive effects.** SPACE PROPULSION 2020+1 www.researchgate.net/publication/350108418 (available as a free pdf)

[Reactionless drives, basically a form of perpetual motion machines, have been around for a while. Those of us who are a certain age can remember John W. Campbell Jr, the editor of ANALOG science fiction magazine, championing a device called the Dean Drive, which was supposed to be a reactionless drive. It never worked.]

[NASA is constantly plagued by inventors who think they have invented a space drive that does not require fuel. This paper dealt with the EM Drive, which supposedly uses microwaves to thrust through space, but as close study showed, the effects were nonexistent.]

Authors' abstract: *The EMDrive is a proposed propellantless propulsion concept claiming to be many orders of magnitude more efficient than classical radiation pressure forces. It is based on microwaves, which are injected into a closed tapered cavity, producing a unidirectional thrust with values of at least one mN/kW.*

This was met with high scepticism going against basic conservation laws and classical mechanics. However, several tests and theories appeared in the literature supporting this concept. Measuring a thruster with a significant thermal and mechanical load as well as high electric currents, such as those required to operate a microwave amplifier, can create numerous artefacts that produce false-positive thrust values.

After many iterations, we developed an inverted counterbalanced double pendulum thrust balance, where the thruster can be mounted on a bearing below its suspension point to eliminate most thermal drift effects. In addition, the EMDrive was self-powered by a battery pack to remove undesired interactions due to feedthroughs.

Using a geometry and operating conditions close to the model by White et al that reported positive results published in the peer-reviewed literature, we found no thrust values within a wide frequency band including several resonance frequencies.

Our data limits any anomalous thrust to below the force equivalent from classical radiation for a given amount of power. This provides strong limits to all proposed theories and rules out previous test results by more than three orders of magnitude.

Monette, M., et al (2021) **The Spacedrive project: MACH-effect-thruster experiments on high-precision balances in vacuum.** SPACE PROPULSION 2020+1 www.researchgate.net/publication/350108329 (available as a free pdf)

[Yet another reactionless drive, variously known as the Mach-effect drive or the Woodward thruster, using piezoelectricity.]

Authors' abstract: *The Mach-Effect-Thruster, an original design from Woodward that relies on the particular vibration of an asymmetric, piezoelectric stack actuator to produce thrust, is one concept that was extensively tested. In an attempt to validate the results published in peer-reviewed literature, several MET devices were tested on two different types of balances in vacuum conditions: a torsion balance and an inverted counterbalanced double pendulum, as well as on a rotating apparatus.*

The instruments are characterized by background noise lower than 5 nN after averaging and are calibrated using laser interferometry and a voice coil with a high-resolution current source. Encased in grounded mu-metal shielding on the balance, and powered by dedicated amplifiers, the device was swept with a frequency between 20 and 50 kHz in order to identify the operating range with the largest beam deflections.

Measurements with the torsion balance from a previous campaign seem to indicate vibration artefacts, thermal noise and changes in the experiment's centre of mass at specific resonance frequencies. These measurements were repeated with different device orientations on the double-pendulum balance, and deflections of similar magnitude that can be explained by thermal expansion and device resonance were also observed.

Recording both balance beam displacements with a sampling rate of up to 25 MHz revealed a significant vibration when exciting the actuator around its longitudinal resonance, regardless of the mounting and isolation. Calculations and simple modelling of the resulting pulsed force from the vibrations confirms

the hypotheses made from balance measurements. Additional tests were performed on a rotating apparatus to investigate the presence of mass fluctuations in a centrifugal force field without having to synchronize with a push-pull force. Our tests reveal the presence of mechanical artefacts but no thrust.

Neunzig, O., et al (2021) **Thrust measurements and evaluation of asymmetric infrared laser resonators for space propulsion.** SPACE PROPULSION 2020+1 www.researchgate.net/publication/350108417 (available as a free pdf)

[This reactionless drive used lasers. No go, no surprise.]

Authors' abstract: *Amongst different concepts, the EMDrive is a proposed device claiming to be more efficient in converting energy into propulsive forces than classical photon momentum exchange. It is based on a microwave resonator inside a tapered cavity.*

Recently, Taylor suggested using a laser instead of microwaves to boost thrust by many orders of magnitude due to the higher quality factor of optical resonators. His analysis was based on the theory of quantised inertia by McCulloch, who predicted that an asymmetry in mass surrounding the device and/or geometry is responsible for EMDrive-like forces.

We put this concept to the test in a number of different configurations using various asymmetrical laser resonators, reflective cavities of different materials and size as well as fiber-optic loops, which were symmetrically and asymmetrically shaped. A dedicated high precision thrust balance was developed to test all these concepts with a sensitivity better than pure photon thrust, which is the force equivalent to the radiation pressure of a laser for the same power that is used to operate each individual devices.

In summary, all devices showed no net thrust within our resolution at the nanonewton range, meaning that any anomalous thrust must be below state-of-the-art propellantless propulsion. This puts strong limits on all proposed theories like quantised inertia by at least four orders of magnitude for the laboratory-scale geometries and power levels used with worst case assumptions for the theoretical predictions.

SIGNS, SIGNS, EVERYWHERE A SIGN
photo by Dale Speirs