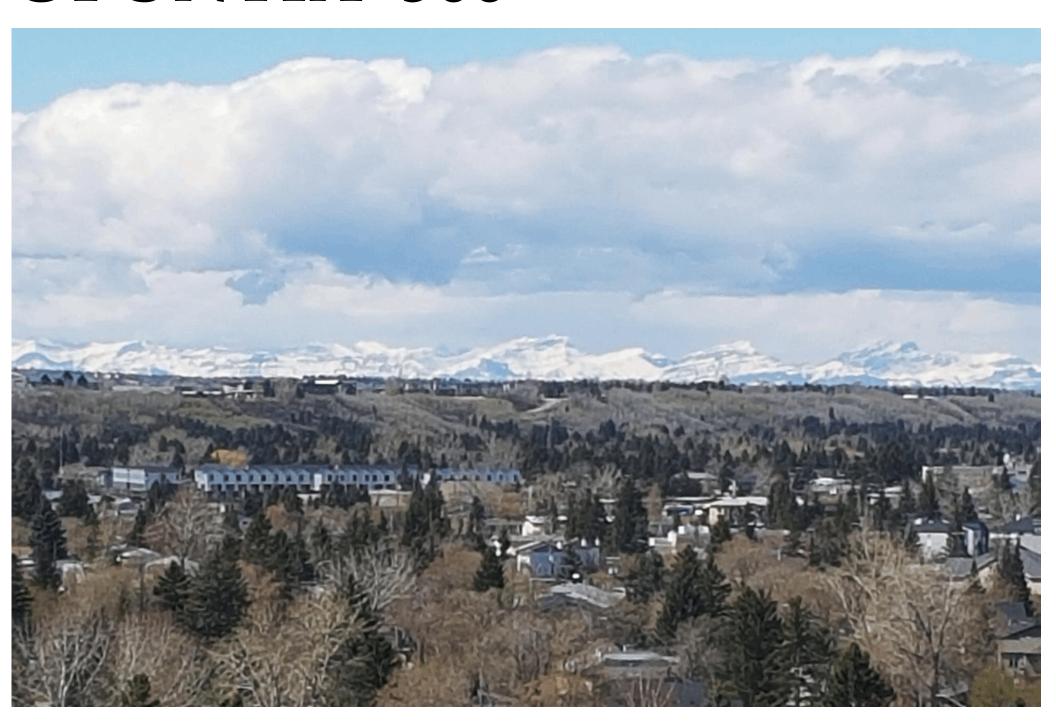
OPUNTIA 500



Middle May 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.

ABOUT THE COVER: I took this photo on May 10 from the Bowmont cliffs of the Bow River in northwest Calgary, looking west over the suburb of Bowness. Snowmelt in the Rockies doesn't begin until June. I'll have more photographs of Bowmont Park in the next issue.

THE LONG HAUL

by Dale Speirs

OPUNTIA 500 sounds like a stock car race. In March 1991, the first issue of this zine appeared. It has been steadily plodding forward ever since as a journal of record. Very few perzines have been as continuous as mine.

OPUNTIA was only in print until 2014-03-31, when Canada Post jacked up postage rates to a breathtaking level. Domestic letter mail went from 63 cents to 85 cents, and to mail even a postcard internationally was \$2.56. So this zine has been pdf ever since.

A hearty thank you to the Website hosts for this zine. No one in my family is interested in zinedom, so I rely on others to archive this zine. I hope that 500 issues is not too many. I'm 65 now, so I won't live to issue #1,000.

AROUND COWTOWN

photos by Dale Speirs

Although I occasionally saw squirrels during the winter when chinooks blew through, it wasn't until late April that they became a daily sight. I keep a bag of peanuts by the front door and every time I leave the house I sling a few across the lawn. This squirrel was well camouflaged inside the big spruce tree in front of my house but its flickering movements gave it away.





As I Strolled Out One Day.

At left: Seen in the Altadore district along 14 Street SW.

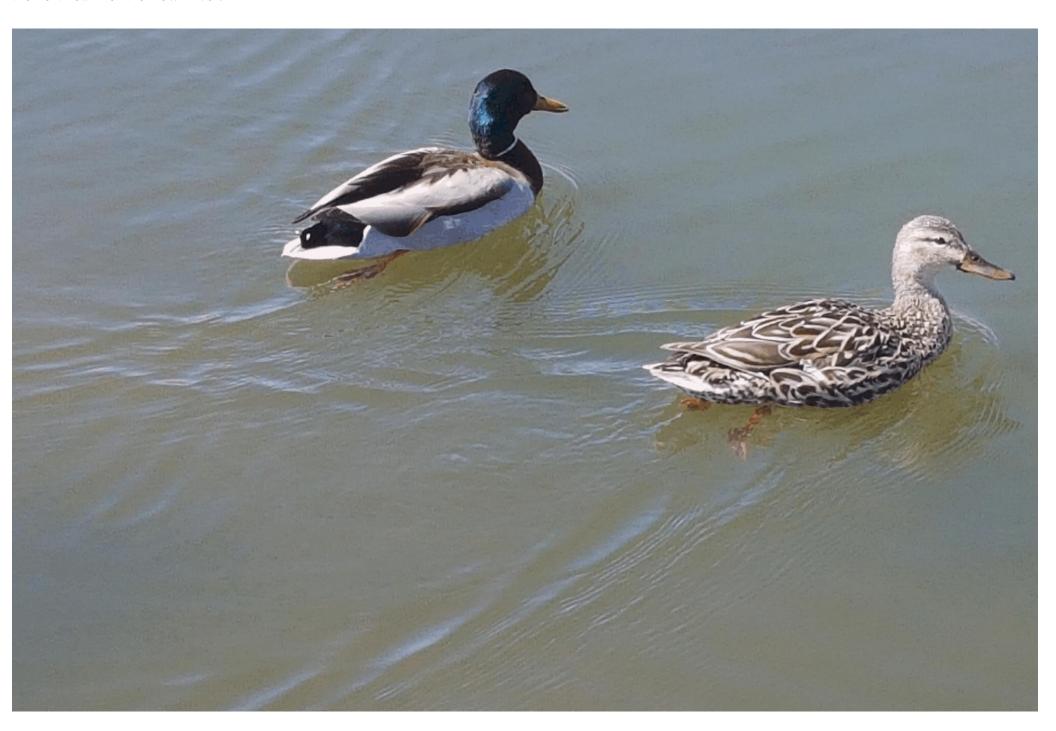
Bottom: Seen in the Beltline district. The parking lot was a fast food outlet.

At right: I know exactly what happened here because I worked 31 years for the Parks Dept. This is the boundary between Altadore (the arena and concrete sidewalk) and Garrison Woods (the paved park pathway). Separate chains of command and separate bureaucratic empires, and never the twain shall coordinate.





Okay, one photo from Bowmont Park. Taken May 10 at a floodplain pond on the north bank of the Bow River.



CURRENT EVENTS: PART 19

by Dale Speirs

[Parts 1 to 18 appeared in OPUNTIAs #474, 475, 479, 480, 483, 484, and 488 to 499.]

The third wave hit Alberta in early April, but this emergency alert sent to all cellphones was very belated. Both the provincial and federal governments are stumbling about reacting to events rather than anticipating them.

Emergency alerts

Friday, April 30, 2021

EMERGENCY ALERT/ALERTE D'URGENCE



Alberta Emergency Alert - Public Health Alert - issued by Government of Alberta. New COVID-19 restrictions are now in effect for hot spot regions across Alberta. Please follow the rules, get vaccinated and go outdoors to safely socialize while distancing to help stop the spread. To learn more, visit https://www.alberta.ca/covidab or call 310-0000.

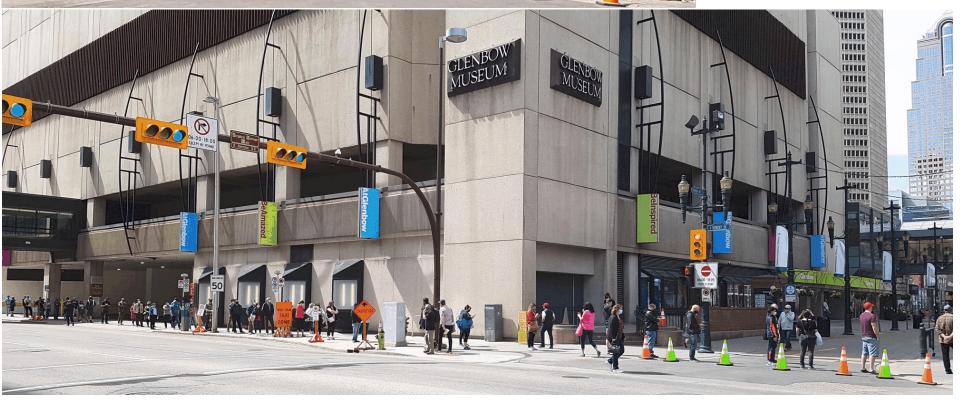
I took these photos on the Stephen Avenue pedestrian mall downtown a few hours before I received the emergency text. The Telus Convention Centre has been converted into a walk-in mass vaccination site for those who don't have bookings at a pharmacy. The lineup stretched two blocks down the avenue and around the corner.











Seen In The News.

As of May 5, Canada had 1,257,307 COVID-19 cases, 24,453 deaths, and 14,567,781 vaccinations. Our population is about 38,000,000. Still nowhere near herd immunity but slowly getting closer.

As of May 5, the Alberta government tightened up COVID-19 restrictions to deal with the third wave, which surpassed the first two waves. Restaurants can only offer takeout or delivery food. Supermarkets and stores are restricted to 10% of fire code occupancy, not including staff. Religious services are restricted to 15 worshipers. Funeral services are restricted to 10 mourners. Outdoor gatherings are restricted to 5 people.

Obviously there is no science behind these restrictions. Provincial health authorities are making up the rules on the fly. Consider the following logical consequences. Only 15 people are allowed inside a church unless one of them is dead, in which case only 10 people are allowed. If the service is held outside in the fresh air, then only 5 people can attend the sermon or funeral.

My local supermarket has restricted entrance to 75 customers at a time under the 10% rule. If, however, I were to go inside and begin preaching a sermon, I could force them down to 14 customers. If a customer felt guilty because my sermon hit home and died of a heart attack, then 5 more people would have to leave. The parking lot would have to be cleared by Security because only 5 customers could stand in line waiting for admittance.

But wait! There's more! The supermarket could have 10, 20, 30, or 50 staff on duty inside because staff numbers are exempt. But if any of them wanted to step outside for a smoke, they could not do so if there were already 5 customers out in the parking lot.

Meanwhile, just down the street from where I live, construction is in full swing on a 7-unit rowhouse condominium. When I walk past, there are a dozen or more tradesmen working at any given moment, usually several of them shoulder to shoulder as they fit the frames or drywall. That doesn't include the steady stream of delivery trucks coming and going. Essential occupations are exempt.

The federal government isn't much better. Trudeau had to go begging to other countries to get vaccines because the Liberals supported globalization as being cheaper. But when the vaccines were ready, the other countries hoarded them.

Seen In The COVID-19 Literature.

Pekar, J., et al (2021) **Timing the SARS-CoV-2 index case in Hubei province.** SCIENCE 372:doi.org/10.1126/science.abf8003

Authors' abstract: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) may have had a history of abortive human infections before a variant established a productive enough infection to create a transmission chain with pandemic potential. Therefore, the Wuhan cluster of infections identified in late December of 2019 may not have represented the initiating event.

We used genome data collected from the early cases of the COVID-19 pandemic combined with molecular clock inference and epidemiological simulation to estimate when the most successful variant gained a foothold in humans. This analysis pushes human-to-human transmission back to mid-October to mid-November of 2019 in Hubei Province, China, with a likely short interval before epidemic transmission was initiated.

Understanding when severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) emerged is critical to evaluating our current approach to monitoring novel zoonotic pathogens and understanding the failure of early containment and mitigation efforts for COVID-19. We used a coalescent framework to combine retrospective molecular clock inference with forward epidemiological simulations to determine how long SARS-CoV-2 could have circulated before the time of the most recent common ancestor of all sequenced SARS-CoV-2 genomes.

Our results define the period between mid-October and mid-November 2019 as the plausible interval when the first case of SARS-CoV-2 emerged in Hubei province, China. By characterizing the likely dynamics of the virus before it was discovered, we show that more than two-thirds of SARS-CoV-2-like zoonotic events would be self-limited, dying out without igniting a pandemic.

Chen, S., et al (2021) **Climate and the spread of COVID-19.** SCIENTIFIC REPORTS 11:doi.org/10.1038/s41598-021-87692-z (available as a free pdf)

Authors' abstract: Visual inspection of world maps shows that coronavirus disease 2019 (COVID-19) is less prevalent in countries closer to the equator,

where heat and humidity tend to be higher. Scientists disagree how to interpret this observation because the relationship between COVID-19 and climatic conditions may be confounded by many factors.

We regress the logarithm of confirmed COVID-19 cases per million inhabitants in a country against the country's distance from the equator, controlling for key confounding factors: air travel, vehicle concentration, urbanization, COVID-19 testing intensity, cell phone usage, income, old-age dependency ratio, and health expenditure. A one-degree increase in absolute latitude is associated with a 4.3% increase in cases per million inhabitants as of January 9, 2021.

Our results imply that a country, which is located 1,000 km closer to the equator, could expect 33% fewer cases per million inhabitants. Since the change in Earth's angle towards the sun between equinox and solstice is about 23.5°, one could expect a difference in cases per million inhabitants of 64% between two hypothetical countries whose climates differ to a similar extent as two adjacent seasons.

According to our results, countries are expected to see a decline in new COVID-19 cases during summer and a resurgence during winter. However, our results do not imply that the disease will vanish during summer or will not affect countries close to the equator. Rather, the higher temperatures and more intense UV radiation in summer are likely to support public health measures to contain SARS-CoV-2.

Given the rapid spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in winter 2020/2021 in the Northern Hemisphere, many inhabitants and policymakers in the corresponding countries hope for relief when the weather gets warmer and more sunlight reaches the Earth's surface in spring and summer.

Indeed, many viral acute respiratory tract infections, such as influenza A and B, rhinovirus, respiratory syncytial virus, adenovirus, metapneumovirus, and coronavirus, are climate dependent and share such seasonal patterns.

Some viruses may have better stability in low-temperature, low-humidity, and low-UV radiation environments. In addition, people tend to gather more in indoor places in winter, which can facilitate the spread of diseases; and vitamin D levels in humans tend to decline in winter, which may weaken the immune response.

Thus, an association between climate conditions and the spread of SARS-CoV-2 seems plausible.

Zhang, J., et al (2021) Structural impact on SARS-CoV-2 spike protein by **D614G substitution.** SCIENCE 372:525-530 (available as a free pdf)

Authors' abstract: Substitution for aspartic acid (D) by glycine (G) at position 614 in the spike (S) protein of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) appears to facilitate rapid viral spread. The G614 strain and its recent variants are now the dominant circulating forms.

Here, we report cryo-electron microscopy structures of a full-length G614 S trimer, which adopts three distinct prefusion conformations that differ primarily by the position of one receptor-binding domain. A loop disordered in the D614 S trimer wedges between domains within a protomer in the G614 spike.

This added interaction appears to prevent premature dissociation of the G614 trimer, effectively increasing the number of functional spikes and enhancing infectivity, and to modulate structural rearrangements for membrane fusion.

Bair, E., et al (2021) **COVID-19 lockdowns show reduced pollution on snow and ice in the Indus River Basin.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 118:doi.org/10.1073/pnas.2101174118 (available as a free pdf)

Authors' abstract: Melting snow and ice supply water for nearly 2 billion people. The Indus River in South Asia alone supplies water for over 300 million people. When light-absorbing particles (LAP) darken the snow/ice surfaces, melt is accelerated, affecting the timing of runoff. In the Indus, dust and black carbon degrade the snow/ice albedos.

During the COVID-19 lockdowns of 2020, air quality visibly improved across cities worldwide, for example, Delhi, India, potentially reducing deposition of dark aerosols on snow and ice. Mean values from two remotely sensed approaches show 2020 as having one of the cleanest snow/ice surfaces on record in the past two decades. A 30% LAP reduction in the spring and summer of 2020 affected the timing of 6.6 km3 of melt water.

It remains to be seen whether there will be significant reductions in pollution post-COVID-19, but these results offer a glimpse of the link between pollution and the timing of water supply for billions of people. By causing more solar radiation to be reflected, cleaner snow/ice could mitigate climate change effects by delaying melt onset and extending snow cover duration.

Zhang, J., et al (2021) **The impact of relaxing interventions on human contact patterns and SARS-CoV-2 transmission in China.** SCIENCE ADVANCES 7:doi.org/10.1126/sciadv.abe2584 (available as a free pdf)

Authors' abstract: Nonpharmaceutical interventions to control SARS-CoV-2 spread have been implemented with different intensity, timing, and impact on transmission. As a result, post-lockdown COVID-19 dynamics are heterogeneous and difficult to interpret.

We describe a set of contact surveys performed in four Chinese cities (Wuhan, Shanghai, Shenzhen, and Changsha) during the pre-pandemic, lockdown and post-lockdown periods to quantify changes in contact patterns.

In the post-lockdown period, the mean number of contacts increased by 5 to 17% as compared to the lockdown period. However, it remains three to seven times lower than its pre-pandemic level sufficient to control SARS-CoV-2 transmission.

We find that the impact of school interventions depends nonlinearly on the intensity of other activities. When most community activities are halted, school closure leads to a 77% decrease in the reproduction number; in contrast, when social mixing outside of schools is at pre-pandemic level, school closure leads to a 5% reduction in transmission.

WINNIPEG IN 2023

The big news for Canadian science fiction fans is that Winnipeg is bidding for the 2023 Worldcon. The city hosted the 1994 Worldcon, which went very well (see OPUNTIAS #21 and 22). Keycon is Winnipeg's annual convention (www.keycon.org), which has been running for 39 years as of 2021, and provides an experienced cadre of on-site fans for the Worldcon.

The venue will be the same convention centre as in 1994 but which has since been expanded and upgraded. The area has numerous hotels within walking distance. Winnipeg is a relatively compact city with lots of tourist attractions such as sternwheelers on the rivers, Louis Riel monuments, and good weather that time of year. The downtown core and riverbank parks are easily walkable.

The bid committee is Cansmof Inc, the name of which will mean more to the Old Guard than newbies. The proposed dates are August 24 to 28. The Website is www.winnipegin2023.ca

Organization Of The Bid.

Bid Chair: Terry Fong (Montreal, Québec) Vice-Chair: Robbie Bourget (Slough, England)

Vice-Chair: Linda Ross-Mansfield (Winnipeg, Manitoba)

Vice-Chair: Jannie Shea (Tulsa, Oklahoma)

Graphics: Phynix Caskey (Winnipeg, Manitoba)

Social Media: Marah Searle-Kovacevic (Toronto, Ontario)

WSFS Advisor: Kevin Standlee (Fernley, Nevada)

Web team: Carl Fink (Greenlawn, New York) Web team: N. Cenk Gökçe (Ottawa, Ontario) Web team: Albert Sousa (Winnipeg, Manitoba)

SERIES DETECTIVES: PART 12

by Dale Speirs

[Parts 1 to 11 appeared in OPUNTIAs #402, 406, 425, 448, 459, 467, 472, 477, 485, 491, and 497.]

The old-time radio series mentioned here are available as free mp3 downloads from the Old Time Radio Researchers at www.otrrlibrary.org

Bulldog Drummond.

Capt. Hugh Drummond began life in 1920 as a series of novels by Herman C. McNeile, who wrote under the pseudonym of Sapper. The character appeared in numerous stage plays and movies during the 1930s, and aired on radio from 1941 to 1954. There was little continuity between the media formats, and often little within them.

In the novels he was a returned World War One veteran with restlessness that drove him into adventure seeking. After McNeile's death in 1937, the series was carried on by Gerard Fairlie until 1954. Drummond was married to Phyllis Clavering throughout the book series.

In the movies from 1922 to 1951, Drummond was an Englishman of private means who was a police detective when not swanning about country manors or European resorts. He had a fiancee Phyllis Clavering, whose main occupation was being kidnapped. The plots varied little and the movies were prosaic at best. However, they are worth watching once.

In the radio series he was in England for the first few episodes, then emigrated to the USA with his faithful valet Denny. There he roamed the country as a paladin with some sort of police powers.

From the movies came BULLDOG DRUMMOND ESCAPES (1937), available on the DVD boxed set "50 Movies Mystery Classics" from Mill Creek Entertainment. The screenplay was by Edward T. Lowe Jr, adapted from the stage play BULLDOG DRUMMOND AGAIN. This explained why the majority of the scenes took place inside or around a manor house, basically a few static sets.

Phyliis Clavering was being held captive in a manor house by a gang who wanted her to use her fortune in buying their counterfeit bonds. Presumably the

transaction could then be declared legitimate income, and the bonds and Clavering subsequently quietly disappeared.

Bulldog Drummond and his idiot pal Algy Longworth found out about the scheme. They couldn't convince the police, so went snooping about the manor. Lots and lots of dimly-lit scenes in the manor at night, with every possible combination of confrontations between all the characters.

Clavering vacillated between a helpless maiden quivering in fear and a woman who knew how to swing a blunt instrument. By the movie's end, it was a wonder there was a single intact vase in the manor, she having smashed so many of them over various heads.

Drummond stumbled about hither and you gathering clues that mostly were useless. The final gun battle cleaned out most of the supporting villains. Drummond got to kiss Clavering in the final scene, and so to the end credits.

BULLDOG DRUMMOND COMES BACK (1937) was written by Edward T Lowe Jr, based on the 1928 Drummond novel THE FEMALE OF THE SPECIES. It is available on the DVD boxed set "50 Movies Mystery Classics" from Mill Creek Entertainment.

The villains were Mikhail Valdin and his sister Irena Soldanis. They were looking for revenge after Bulldog Drummond got her husband hanged for his crimes. Phyllis Clavering was once more kidnapped, it being her station in life.

Valdin anticipated The Riddler in that he left riddles in various places to lure Drummond to the lair where Clavering was held hostage. Valdin and his sister also used gramophone records as a state-of-the-art method of leaving remote-controlled messages. They didn't have voice mail yet.

After assorted goings and comings across the countryside while solving the riddles, Drummond arrived at the manor house where Clavering was held in the dungeons. He was trapped with her. Soldanis began pumping poisonous smoke into the dungeon, but eventually they escaped.

There was a brief car chase across the countryside but everything wrapped up with Clavering once more in Drummond's arms. Why she stayed with that man was the real mystery. No wonder the radio series dumped her.

BULLDOG DRUMMOND IN AFRICA (1938) was written by Garnett Weston, based on the 1937 novel CHALLENGE. It is available on the DVD boxed set "50 Movies Mystery Classics" from Mill Creek Entertainment.

As the movie opened, Drummond and Clavering were about to be married the following day. He and his valet Tenny Tennyson were in a predicament as they had sent out their dress pants to the cleaners. By a mistake, all their pants had been sent, which they only discovered the next morning. After spending some time walking about bare legged, they hit upon the idea of turning a tartan table cloth into kilts.

There was another kidnapping but surprisingly it wasn't Clavering. Drummond's controller Col. J.A. Nielson was taken by villains to Spanish Morocco. If he didn't tell them the military secrets he had, they would feed him to the lions. Clavering saw the kidnapping from a distance and alerted Drummond.

The chase was on, but not without bureaucratic obstruction in both England and Morocco. Drummond's plane was bombed. There was a running gun fight through the villain's lair which ended when Drummond managed to flip him into range of a lion. At that point, the movie abruptly ended to the sound of the lion crunching bones.

Nick Carter.

NICK CARTER, MASTER DETECTIVE aired on old-time radio from 1943 to 1955. The detective first appeared in print in 1886, predating Sherlock Holmes, and often appeared on stage and in movies. Nick Carter appeared in his own pulp magazines and dime novels, written by house authors.

Carter had boundless confidence in his ability and came across as arrogant to all, including his secretary/girlfriend Patsy Bowen. He had his own laboratory, a huge library, and kept better files than the FBI.

"The Hanging Paperhanger" aired on 1945-08-05 (note that date), sponsored by Acme Paints. No wonder they hanged the guy. Nick Carter and Patsy Bowen came to the assistance of his old cook Mrs Nelson.

She was now working at a war plant as a cleaning woman. (But not for long, as the day after this episode was aired an atomic bomb was dropped on Hiroshima

and three days later on Nagasaki.). She lived in a boarding house run by a man named Harrow, who worked as a paperhanger.

For no apparent reason, he wallpapered her room but nowhere else. She took Carter and Bowen to see it. They found Harrow hanged in the closet. Carter specifically stated he wasn't going to call in the police even though it was murder.

The wallpaper had been plastered overtop the existing wall, including decorations and pictures Nelson had taped up, producing a lumpy wall. No professional paperhanger would do such a job without first smoothing the surface.

Carter and Bowen searched Harrow's room and found six bottles of expensive perfume. She estimated them at \$60 each by their labels. Before they could proceed further, the police arrived, having received an anonymous telephone call ten minutes prior that Carter had killed Harrow.

After arguing with the police for several minutes, Carter took them to see Mrs Nelson and have her vouch for him. She had vanished. So had the perfume. Pausing only for a Linex floor polish commercial, the plot then introduced a new character, Spieler Wilson, a tenant who just arrived home.

The police and Carter had the wallpaper pulled off Nelson's room. They also found Wilson had been selling perfume on a street corner and had a satchel full of bottles. Examining the uncovered wall, they found bright perfume labels had been plastered on the wall by Nelson.

Where did she get all the perfume labels? As Carter pointed out to the police, they aren't sold in stores. Carter and Bowen went to the perfume company to find out who printed the labels. The company manager was a woman who spoke with Hollywood's idea of a French accent.

When Carter told her about the murder investigation, she suddenly lost her French accent and began speaking in a normal voice. She told him the company printed its own labels. Exclusive labels are like cash, kept in a secure place.

As Carter and Bowen left, shots were fired at them from a car. They gave chase but the gunman lost them near the war plant where Nelson worked. With the police, they entered the print shop of the factory. Carter successfully bluffed the printer, named Maxwell, into giving himself away as a counterfeiter of labels for expensive products.

A crescendo of music, a commercial for Linex furniture polish, and on to the epilogue where Carter explained away the loose ends to Bowen. Maxwell had Nelson stashed away in a back room. Nelson had found some of the labels while cleaning, and naturally assumed they were scrap paper, for what would a war plant be doing with them? They were bright and colourful, so she took them home to decorate her wall.

Wilson and Harrow had been part of the scheme, to peddle cheap perfume as the \$60 product. Maxwell cleaned house, the boarding house, to cover up his operation.

"The Case Of The Phantom Shoplifter" was written by Norman Daniels and aired on Christmas Day 1949. It opened with a brief announcement that the show was transcribed so that the cast and crew could enjoy Christmas at home.

The episode began with Nick Carter and police Sgt Matheson attending a case where mink coats in a womens' fashion store were disappearing by shoplifting. Peggy Matthews was a suspect so the two men drove to her boarding house room. They removed her from the list after finding her body. She had been strangled.

To allow the listener time to recover from the shock, a honey-voiced announcer burbled about how wonderful it was to celebrate Christmas. People could be secure in the knowledge that Old Dutch Cleanser played a part in the happy homes of radio listeners.

Meanwhile, back at the body, the men called in Patsy Bowen to provide a woman's touch for the murder investigation (their words, not mine). The dead woman had a fur coat in her room but it wasn't one of the stolen ones. Bowen identified it as rabbit skin, but the receipt said Matthews paid \$400 for it, way too much.

An investigation at the store didn't reveal much about how the furs were being lifted. The store manager said they had been plagued by a swarm of professional shoplifters but only small items had been taken when the store detectives caught them. No one could figure out how the furs were physically removed from the building.

A spiv named Bruno Sealey was identified as a frequent visitor to the deceased Matthews, so Carter and the sergeant drove out to his bargain store. They found him dying from a stab wound. With his final breath, he gasped the name of Marge Barnette.

When someone died on this show, it was time for a commercial. Just after Sealy's death rattle, an announcer consoled the audience with good news. The Old Dutch people wished everyone happy holidays.

Carter and Bowen visited Barnette. She denied anything about fur coats, but did mention she and other shoplifters had been hired to wander about the store and decoy the floorwalkers. The detective duo, with permission of the manager, staked out the store after closing time.

They found the thieves, who had guns and were much discommoded when they saw Carter and Bowen. An inside job, done by employees above suspicion. Shots were fired, excursions took place in the store, and actual alarms sounded amidst the alarums.

But first, warmest Christmas wishes from the Old Dutch management. Then back to the store, where the alarms brought the police. Off to the slammer and no Christmas turkey for them. The big surprise was the final commercial, not for cleanser but for Delrich margarine.

Barrie Craig.

BARRIE CRAIG, CONFIDENTIAL INVESTIGATOR was probably the only private detective series whose star had actually been a private detective in real life. William Gargan had worked in an investigator's office as a young man, and professed amusement at how script writers depicted private detectives at variance with the real ones.

This series aired from 1951 to 1955. Craig narrated most of each episode. The plots often tangled up, but there were several summations during each episode so the listener wouldn't get lost. The episodes are worth listening to, and the series grows on the listener.

A regular character was Jake the elevator operator. He was off a Vermont farm and in each episode he gave Craig a different reason why he left the farm and moved to New York City. My favourite was "*Too close to New Hampshire*".

"Beware The Walking Dog" aired on 1953-05-03, written by Louis Vittes. The beautiful client (private detectives never have fat ugly women hiring them) began the episode by asking Barrie Craig how anxious he was not to be killed. Doreen Dimple (her stage name) didn't want anyone coming to harm because of Caesar.

Her offer was \$500 to walk a dog, the aforenamed Caesar. She said the last two times she walked the dog she had been shot at by an unknown man. Later that evening Craig arrived at her apartment. Caesar proved to be loud, noisy, and overgrown.

Also loud and noisy were the shots fired at Craig as he walked the dog. The gunman escaped. Returning to the apartment, Craig found Dimple bound and gagged, and her boyfriend Corky dead from a gunshot to the heart.

While waiting for the police, Dimple mentioned that Corky's wife would be upset to learn the news. Craig left to visit the woman who didn't yet know she was a widow. She didn't grieve when he told her. Nor did her boyfriend Anthony Bryant, who was unsuccessfully hiding behind the drapes.

The subsequent conversation was about divorce actions and who might have fired the shots. It ended with ill will all around. Craig's next conversation was with the police, as a result of which they agreed to a stakeout on Dimple's apartment.

The police mentioned Dimple's other boyfriend Joe Stover. More shots were fired and alarums sounded. The final conclusion was that Dimple was the murderer. A convoluted ending with a good head fake. No word as to who got custody of Caesar.

"The Corpse Who Was Wrong" aired on 1954-05-25, written by Louis Vittes. The client was W. Stubbins, attorney, representing the estate of Arthur Philip Peterson, age 61 and never getting older. The latter's wife Stella, age 24, had disappeared, having separated from her husband three months prior.

Stubbins hired Barrie Craig to locate her. He handed over a cheque for \$500 and a photograph of Stella. After the lawyer left, Craig wondered what the W. stood for. Off to Stella's last known address, which proved to be a blank. The landlady Mrs Cole said she had never lived there but also that he wasn't the first person enquiring for her. She didn't recognize the photo.

As Craig proceeded, it became apparent that someone was ahead of him seeking Stella. It was obvious Stella was a popular woman. He dropped in at the police precinct and asked Lieutenant Rogers to run the licence plate of a green car tailing him.

Returning to his office, Craig found a woman waiting in the dark, holding a gun. She said she was Stella. They conversed in the blackness but were interrupted by a visitor, also carrying a gun. She escaped while Craig was struggling with the man.

The man escaped as well, but before Craig could chase him, the telephone rang. Rogers was on the line, saying that Cole had been murdered. Cole had been tortured before she died, as if to get information out of her. The main reason he had called was that the licence plate of the green car had come back as registered to Stella Peterson.

Craig continued his rounds and found an informant named Wendell. They tracked Stella to a shack owned by Cole. Stubbins arrived but did not adhere to the law. Craig saw him coming and ducked out the back way without being seen.

Pointing a gun, Stubbins discoursed at length about how Stella's husband had cut her out of his will and left everything to various charities for which Stubbins was the sole administrator. Pausing only to catch his breath, Stubbins continued.

Peterson had changed his mind and put Stella back in his will just before he died. This put Stubbins in an awkward position because he had borrowed money from the trust fund in anticipation of soon being administrator. If Stella died before probate, then the estate would default to the charities and Stubbins could settle the books his way.

Having run down at the mouth after one of the longest infodumps I have heard on old-time radio, it was time for gunshots and screaming. Craig ambushed Stubbins and the matter was settled. Stella expressed her gratitude in a practical way, nudge nudge, wink wink.

Boston Blackie.

BOSTON BLACKIE aired on old-time radio from 1944 to 1950, and was also a series of 14 movies. His real name was Horatio Black but everyone, including his girlfriend Mary Wesley, called him Blackie. The radio shows are leavened with humour and quips. Writers were not credited, although the actors were.

Blackie had been a jewel thief in Boston and was supposedly reformed now that he lived in New York City. Supposedly, because he had no day job and took no fees as an amateur detective, yet lived well in a nice apartment and squired Wesley around to the fanciest nightclubs.

Blackie's nemesis was NYPD Homicide Inspector Farraday. The name was originally spelt in the usual way with one 'r' but after the series got going for some reason the extra letter was added. The tag line in the opening credits was "Boston Blackie: Enemy to those who make him an enemy, friend to those who have no friend."

In the early episodes of the series, Farraday would arrest Blackie on sight, then gather evidence to fit him. Over time their relationship moderated to being sparring partners. Blackie liked to barge into hot cases and race Farraday to the solution, while Farraday always had the snappiest lines.

One amusing aspect of the series was the berserk organist who provided all the music. Scenes were punctuated, and that is the correct word, by abrupt chords on the organ. Dramatic lines spoken by the cast were followed by crescendos, although the opening and closing themes were more sedate.

"A Vase Leads To Murder" aired on 1946-02-26. Boston Blackie and Mary Wesley were at a public auction when a vase she liked came up for sale. Blackie bid for her against a man in a green hat, and won it for \$50 (about \$500 in today's depreciated currency). The other man was not happy and uttered threats.

Back at Blackie's apartment, the man in the green hat appeared, demanding the vase with menaces. Unfortunately for him, Blackie had a gun, so he left, muttering imprecations. The vase was couriered to Wesley's place but the messenger arrived mortally wounded by a gunshot and died on her doorstep. Green Hat had seen and tailed him but didn't have the opportunity to snatch the vase.

Blackie, Wesley, and Farraday took the vase to an antiques dealer, who said it was factory made and not worth more than \$2. The next stop was a dentist who kindly x-rayed the vase and found nothing in it. The vase was broken but still nothing was inside.

The three went their separate ways. Farraday took the pieces to the police laboratory, while Blackie went home. Who should be waiting for him but Green Hat. They exchanged hostilities before Blackie got the jump, then hauled Green Hat to the police.

Fingerprints revealed him to be Fred Clifford, freshly paroled for bank robbery, the loot of which was never recovered. The vase had belonged to his late wife Nancy. She had worked in a ceramics factory where the vase had been made. Blackie surmised a second identical vase was still at the auctioneer, so off he went, but the man said there had not been a duplicate.

More excursions back and forth across the city as Blackie tailed Clifford. The duplicate vase was found, which when smashed had a storage locker key embedded inside. Meanwhile Wesley fulfilled one of her usual roles by being held hostage, this time by Clifford.

She was rescued in the nick of time by Blackie, also as usual. And for the third as usual, she listened as Blackie explained away the loose threads. The locker key was where the missing loot was hidden.

"The Case Of The Exploding Car" was aired on 1947-09-17. The episode began in a bowling alley where two rival munitions manufacturers, C.F. Baker and Phil Oliver, were competing. Oliver was in a rage because Baker had beaten him out of a large contract.

As they bowled, Oliver made multiple threats of violence against Baker, who didn't take him seriously. In the presence of witnesses, he shouted "I'm going to do something about it, and that's a promise. In 24 hours you're going to be dead."

Jump cut to Henry Smith and his wife Evelyn at home. Smith was a friend who had swapped cars with Baker, who needed a bigger vehicle to haul a load of samples. There are no prizes for guessing what happened when Smith turned the key in the ignition.

Farraday was the investigating detective. The bomb was a stock item produced by the Oliver Munitions Company. It was an open and shut case. When Farraday went to arrest Oliver, he found Boston Blackie and Mary Wesley already chatting with the suspect.

Oliver had known things were bad so he called Blackie for help. But soon enough, when the others had gone, Oliver called in his henchman Paul Williams, whom he had paid \$1,000 for the job. Williams was apologetic about the mixup. Oliver said not to worry. Once Blackie had proven him innocent, then Williams could finish the job.

Another jump cut to the Smith residence, where the widow, hardly grieving, spoke on the telephone with Baker. They called each other 'darling' and chortled about how well their plan worked, to take out the two men who annoyed them the most. Not to mention the \$100,000 life insurance policy she would claim.

Williams paid a visit to Baker and tried to extort protection money. Baker supposedly telephoned Blackie for help but when he got to his apartment, Baker denied having made the call. Blackie barged in anyway and found Williams with him.

That seemed to prove the case against Oliver, but the waters were soon muddied. Williams told police he hadn't actually gotten around to planting the bomb. Wesley talked to the Smith maid, who knew about her missus's boyfriend. There are no secrets from servants.

Blackie brought Baker and Oliver together and staged a J'accuse! meeting to prove Evelyn was the murderer. The episode ended with a bizarre pun which needs to be heard in context.

Casey.

CASEY, CRIME PHOTOGRAPHER aired on radio from 1943 to 1955. The title varied several times but is generally remembered by this variation. The series was based on novels by George Harmon Coxe. The hero was Casey, first name never given, who was a newspaper photographer for the MORNING EXPRESS. He was accompanied by reporter and girlfriend Ann Williams.

"The Life Of The Party" was written by Alonzo Deen Cole and aired on 1947-12-18, just before Christmas. Casey and Ann Williams went to a party in an artist's colony, her assignment being to interview Andre Higgins, a wealthy artist who hadn't done much lately. Higgins like to surround himself with sycophants and pliable woman, plus one gangster.

As they approached the house, they saw a man come out the door and then plunge a knife into his chest. They raised the alarm at the party but no one seemed concerned, much to their disgust. Casey tried to force his way in to use the telephone to call police. At that point, the dead man got up, pulled out the collapsible knife, and everyone had a good laugh at Casey and Williams.

They were brought inside and the party resumed. Since it was by now the halfway mark of the episode, the experienced listener will expect, and not be disappointed, that a real murder would take place soon. Not only that, someone stole a diamond ring worth \$15,000 from the artist's mistress.

As the screams resounded, the episode cut away for a commercial from Anchor Hocking Glass. The announcer reassured the audience that nothing was more comforting than preparing instant coffee in a glass container. Yes, glass preserved the flavour and protected the coffee from contamination. Make certain you buy your instant coffee only in glass containers.

Back at the plot, the party goers squabbled with each other about whodunit. The gangster feared he was going to be blamed for the murder and pulled a gun to prevent others from trying to hold him. Higgins pulled his own gun and shot the gangster dead. Wasn't that a party?

The ring was found but the diamond had been pried off. Casey and the police busily hypothesized who did what. The police concentrated on the finances of the artists. Everyone was impoverished. Casey noticed a wad of chewing gum under a table, to which the diamond was stuck.

The investigation went sideways. Lots of useless information. Casey visited Higgins and accused him of all the crimes. He pulled a gun and bwah-ha!-ha!-ed about how he was clearing out all the parasites that had fastened onto him. Since Casey was booked for the series and Higgins wasn't, the final outcome was self-evident. The other final outcome was the last commercial for Anchor Hocking, plugging its Jadeite dinnerware as a Christmas gift. A 36-piece set for six people cost less than \$5.

"Queen Of The Amazons" was written by Alonzo Deen Cole and aired on 1948-01-08. The episode opened as they usually did, in the Blue Note Café, where Ethelbert the bartender commiserated with Casey and Ann Williams about the cold weather outside.

The reporters didn't get a chance to thaw out, as their editor called them out for duty. The story was about two burglars who tried to rob a circus strong lady. Millicent Hodges, known as Marina, Queen of the Amazons, quickly rendered them hors de combat and the police hauled them away.

The interview out at her farm went well. She had retired but obviously kept in practice. She mentioned her watchdog had been poisoned a week ago. The burglars had been trying to break into a steamer trunk.

Casey noticed some gold medals in plain sight that hadn't been touched. He asked why the burglars would instead go after the trunk. Marina said she had no idea, since there was nothing valuable inside. It was obvious that a setup was in place, although Marina hadn't noticed.

A visitor arrived, Ambrose Higgenbottom who worked at the nearby aircraft factory. Marina was sweet on him. Nothing much else transpired, so the reporters went to the local police station for more details.

One of the burglars had been identified as Gus Newton, a professional safecracker who seemed to be slumming at the farm. The other man was Loder, wanted for espionage. The plot seemed obvious by now.

So was the commercial by Anchor Hocking Glass, which recommended its Jadeite plateware as wedding gifts. Casey returned to the farm sans Williams. His pretext was to take some better pictures of Marina. He smooth-talked her and brought along, no, not Jadeite dishes, but a box of candy. I think the scriptwriter missed a chance to get in on the sponsor's good side.

When Casey tried to steer the conversation to the trunk, Marina's feathers were ruffled. He calmed her down. She said she and Higgenbottom were secretly engaged, waiting for his divorce papers to come through. The trunk was her hope chest. Besides linens and things, there were savings bonds in sealed envelopes given to her by Higgenbottom.

Marina didn't know how much they totaled. Casey grabbed one, tore it open, and revealed plans for an airplane part. Didn't see that coming, did you? Yes, Higgenbottom was a spy.

The man himself showed up to bwah-ha!-ha! and seize the plans. He didn't stand a chance against Marina, but luck was with him when his controllers arrived to claim the plans. They had guns. Der spies sprachened mit der Deutsche accent, which was puzzling because the war had been over for three years. Probably East Germans, possibly very bad Russian accents.

Alarums, fist fights, and lots of shouting followed, culminating with the timely arrival of the Feds. The agents unloaded a lengthy infodump to tie up the loose ends. Then back to the Blue Note Café for some final chitchat with Ethelbert.

Richard Rogue.

ROGUE'S GALLERY aired on radio from 1945 to 1947, with a brief revival for the 1950-51 season. The episodes were written by Ray Buffum. Several actors portrayed private detective Richard Rogue to different effect. Dick Powell, of Richard Diamond fame, was the best..

The gimmick of the series was that once each episode Rogue would be rendered unconscious, during which time he would have a conversation with his alter-ego Eugor (spell it backward). Sometimes Eugor would offer valuable advice, most times he would just restate the plot for listeners who had tuned in late, and occasionally he was just padding to make up the time for the episode.

Slugging a detective unconscious was an old cliché even back then. By all rights, those detectives should have been drooling idiots by the end of the first season because of their weekly concussions.

"The Lady With A Gun" aired on 1946-06-30. Richard Rogue was on a date with his girlfriend Betty Callahan in a nightclub. She was frequently mentioned over the series but had only a bit part.

They were rudely interrupted by a drunk who said he didn't like Rogue following him around getting evidence for his wife's divorce. Since Rogue hadn't been doing that, and the drunk didn't believe him, an altercation necessarily occurred.

Later that night, after dropping Callahan at her apartment, Rogue went home and found a sultry woman waiting for him. She said she was Mrs Webb (first name never given), who had told her husband Matt that she had retained Rogue.

Matt was, of course, the drunk in the nightclub. She had found a receipt for a \$5,000 fur coat, which she had not received. Rogue said he didn't do divorce cases and sent her on her way. The next morning Matt turned up dead with a bullet in him.

Police Lt. Irvine took Rogue out to see the widow, who had been receiving callers, specifically one Fred Gale, who was sales manager for Matt's company. The four-way conversation was awkward but revealed Matt's mistress was his secretary Helen Daiman. Tell the old, old story.

Daiman had been spotted near the crime scene about the time of the murder. Callaghan was adamant that Rogue help Daiman beat the rap. She said she had been chloroformed and woke up later. Rogue decided to find out where the fur coat was, on the premise that it would be near the murderer.

While Daiman was sitting in a jail cell, Rogue thought that made an opportune moment to search her apartment. As he entered it, once again he was slugged from behind, rendering him unconscious and sending him to visit Eugor.

Irvine woke up Rogue in the apartment. He told him that the police had thoroughly examined the apartment earlier and found no fur coat. Yet just now, he had discovered a fur coat hanging in the closet. Obviously someone was trying to frame Daiman.

While they digested that thought, an announcer advised the listeners how tragic dandruff was for women. Fitch's shampoo could solve that problem.

Back at the murder, Rogue resumed his narrative by saying his head was a whirl of thoughts "*like neutrons around an atom*". Well, it was less than a year since Hiroshima, so script writers were still learning what an atom was, nevermind the difference between a neutron and an electron.

There followed an unscripted ad lib that made this episode a must-listen. At the 22m50s mark, just after the neutron remark, Dick Powell tripped over his lines badly, couldn't recover, said "*Holy Christ!*", and rushed on with his dialogue.

I'm certain that listeners across the country sat up in their chairs, not sure if they really had heard Powell swearing or if they had just imagined it.

After that, it seemed a letdown for Rogue to carry on with his case but there were still seven minutes of air time left to fill. He tailed Mrs Webb to Gale's house, then snuck inside to eavesdrop on them. For the first time, her given name was mentioned, as Fred called her Marsha repeatedly.

Their conversation spilled the beans. They were lovers and had done the murder. She had written a murder confession and asked him to do the same. They would exchange the notes and thus always have surety against each other. Such a loving relationship.

The listener, and Rogue, could anticipate what would happen to Gale if he wrote his note. She tried to shoot him, but Rogue interrupted and saved Gale's life. Marsha went to the gas chamber, and so to the end credits.

Richard Diamond.

RICHARD DIAMOND, PRIVATE DETECTIVE aired on radio from 1949 to 1953 as a star vehicle for singer Dick Powell, who was making a transition from crooner to actor. Private detective Richard Diamond, supported by his rich girlfriend Helen Asher, was an average investigator.

His gimmick was that at the end of each episode he would serenade Asher with a romantic ballad in his rich voice. If they were in his apartment, the next-door neighbour would complain in loud counterpoint to Diamond's singing, a very funny running gag through the series. Diamond and Asher were night people, so they constantly woke up the neighbour out of his sleep.

Diamond was played as a happy-go-lucky detective who got on well with the police. Noir, it wasn't, but the episodes were enjoyable listening.

"Photographer's Card" was written by Blake Edwards (best remembered for his Pink Panther movies) and aired on 1950-03-26. Richard Diamond was strolling down the sidewalk when he was accosted by a street photographer, named later in the episode as George Phipps. The man recognized him as a private detective and said he wanted to hire him. He gave Diamond his card, then said he would get in touch later.

The card had a film negative inserted into it, showing a group of people on the sidewalk. Phipps called to arrange a meeting in his apartment but told Diamond not to bring the negative. Diamond taped it to the bottom of his desk drawer. At the apartment he was ambushed by two goons, Louis and Tony, who had just killed Phipps.

They slugged Diamond unconscious. When he revived, they demanded the negative. Not getting it, they rendered him unconscious again and went over to his office to search there. Upon waking, he called the police. The lieutenant knew him from previous cases: "What do you do? Drop circulars on Sing-Sing?"

Checking Diamond's office, as expected it was ransacked and the negative stolen. The next stop was the Speedy Photo Lab, for whom Phipps had worked. They had names and addresses of those who had sent in cards. One of them was Andrew Troop. His photograph showed Tony and Lou in the background walking out of a building, escorting a short stocky man.

That man had just been fished out of the East River by the Homicide squad. He was identified as a broker who had disappeared four days earlier, along with \$200,000 in bearer bonds. The goons must have seen Phipps taking the picture and went back later to tie off the loose end.

Diamond went with the police to stake out Tony's hotel room. Lou came in next. Shouts, gunshots, and other noisy alarums filled the air. And so to Helen Asher's apartment for a piano serenade.

"Mona Lisa Murder" was written by Blake Edwards and aired on 1950-11-15. Arnold Bryce was an art collector with a Mona Lisa painting hanging over the fireplace in the private gallery of his mansion. He had inherited the estate from his uncle Jasper a few months prior. Arnold's wife Della and the butler Timothy hated his choice in art, which tended to modern abstract, pretentious at best and drivel at worst. She didn't like Arnold much either.

The feeling was mutual. When Arnold met with Diamond, he said he wanted information collected so he could get a divorce against Della. He didn't live to get it.

When next Diamond telephoned the mansion, police detective Lt. Walter Levinson answered. Someone had bashed Arnold's head in with the proverbial blunt instrument. The police sergeant was certain the butler did it, but Levinson thought he was reading too many mystery novels. The only other people in the mansion at the time were a maid and Della.

Arnold had told Diamond that he only collected originals. Diamond let that go by despite having seen the Mona Lisa in the gallery, which had been mentioned to the listener. Since the original was hanging in the Louvre, the one in the library was obviously a copy.

The maid was interviewed. She had a Swedish accent thick enough to cut with a knife. She said the Mona Lisa had been there in Jasper's time. Timothy had grown up in the house where his father before him had been butler. She had heard Timothy arguing with Arnold, who wanted to junk the painting.

Diamond became convinced the butler did it. He convinced Levinson to stage a scene to get a confession out of Timothy. What it was, was Diamond playing the piano and singing a song about Mona Lisa. He then got up and walked over to the painting, telling Timothy that Della wanted it gone and had asked him to toss it.

Timothy went berserk and tried to kill Diamond. In the process, he blurted out an admission that he had killed Arnold. That was overheard by Levinson lurking nearby and thus the case wrapped up. Helen Asher never had a part in this episode. Since Diamond had already sung for Timothy, there was no need to serenade her.

Johnny Dollar.

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. The episodes were standard half-hour weekly shows except for a year starting in 1955 October, when it aired as daily 15-minute installments comprising one complete episode each week, or in other words, 75-minute episodes.

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 Pearling Matter" was written by John Dawson and aired in 1956 June as a five-part episode. David Pearling was a wealthy commodities investor who was supposedly killed in a boat explosion at a Florida marina. A local reporter Gracie Edwards reported him dead, a story that was picked up by the wire services and made the national news.

That report caused the commodities market to wobble because Pearling was a big player. The insurance companies were worried because that would affect their investments, so Johnny Dollar was hired to investigate. Just as he began sleuthing, the situation changed 180°.

Pearling was not dead, and the story had to be retracted by the newspaper. Edwards admitted she had been paid by Pearling to write the story. The suspicion of sharp practice by Pearling proved unfounded, as nothing happened in the markets.

Dollar went out to the Pearling mansion but David ran him off. Later his wife contacted Dollar at his hotel and told him the background. Her 24-year-old daughter Jean had run away from home and private detectives couldn't find her. The Pearlings thought that faking David's death might prompt Jean to contact them. The plan didn't work.

Mrs Pearling gave Dollar the name of the detective agency. He went there and got little satisfaction. The insurance company pulled Dollar off the case since there didn't seem to be any financial claim. Dollar was bothered because the Pearlings had never notified the police about their missing daughter. He convinced the company to keep going.

The detective agency then almost immediately claimed to have located Jean in New Orleans. Dollar met David and the detectives at the Pearling mansion. The story seemed unbelievable. David fired the detectives and tried to hire Dollar to retrieve Jean. He went to New Orleans anyway, working for the company, not David.

Dollar tracked to Jean to her apartment which she shared with Janice Floyd. She was supposedly dead from leukemia. He didn't believe it, death certificate and viewing of the body notwithstanding. Alarums and excursions followed, including the traditional slugging the hero unconscious. Dollar was convinced that all the contretemps meant that somewhere big money was involved.

Back to the apartment. Floyd admitted she was Jean, and the dead woman was the real Floyd. She wanted to escape her father by assuming Floyd's identity. Much emoting and several twists. She went off to start her new life, forever estranged from her parents.

Dollar let her go. Final expense account was \$714.35. There was no happy ending.

"The Open Town Matter" was written by Les Crutchfield and aired in 1956 July over five nights. Edgar Blake was the decedent, the Chief of Police in Greensport, Missouri. His non-grieving widow Marty, 25 years younger, filed for a \$50,000 life insurance claim the following day and was most anxious for a settlement. The happy couple had only been married eight months. Needless to say the insurance company was suspicious.

Blake was known to be on the take from gangsters, hence Greensport's reputation as an open town. Marty's story about how her husband was shot dead was doubtful but Johnny Dollar had to prove the case in court. Marty's alibi was furnished by the City Attorney Dave Sherman, who had been staying the night in the Blake house when Edgar was shot as he came home.

Sherman and the mayor were inclined to blame Shorty Wells, local ne'er-dowell who had been sent up by Edgar. Wells had publicly vowed revenge but since the murder had disappeared from sight. Assorted alarums began. Dollar was talking to Marty on a sidewalk when shots were fired at them. The question was who the target was.

The Blake mansion was torched and went up like a Roman candle. The whole town turned out for the spectacle. The house was insured, of course, and the townfolk speculated that Marty was trying to convert all her assets into cash. Someone remarked that she made a mistake parking her car out front instead of putting it inside the garage for an extra claim.

As the mansion burned, Shorty Wells came staggering out of the basement, his clothes smouldering. He was rushed to hospital where he lapsed into unconsciousness. When the mayor visited, he lapsed into death. When Dollar visited, the mayor leapt out the window. From the sixth floor.

A twist ending proved Marty fired the shot that killed her husband. Claim denied. Total expenses \$516.20.

The Falcon.

THE ADVENTURES OF THE FALCON aired on radio from 1943 to 1954. It was based on a popular series of movies which in turn were based on a story by Michael Arlen. As with The Shadow or Bulldog Drummond series, there was no continuity between the different media appearances.

The Falcon was Gay Lawrence in the movies, then later Lawrence's brother, and for radio he became Michael Waring. Why he was called The Falcon was one of the mysteries, since he never operated in disguise and was otherwise just a regular private investigator. In the later part of the series he suddenly turned into a counterspy for the U.S. Army Intelligence overseas.

Each episode opened with Michael Waring answering the telephone as The Falcon. It was a different woman each time, to whom he would explain that he couldn't keep their date because he just received a case. He would give a one or two sentence blurb about the episode, and so to the opening credits.

"The Case Of The Substitute Target" was written by Jerome Epstein and aired on 1951-01-21. The opening telephone call was from Barbara. The Falcon expressed his regrets because he had to teach some gangsters they couldn't get away with murder, especially his.

From there to a dispute between mobsters Travis and Rizzo. The former was an ambitious young man tired of taking orders from old Rizzo. The boss, named Dunlap, walked in at an opportune moment. He said he was impressed with Travis' initiative and offered him a promotion, then sent him on his way.

Speaking privately with Rizzo, Dunlap assured him that Travis would not be long for this world. He wasn't. His girlfriend Lorna Mars went to Michael Waring for help. She was worried she would be the next target. Waring's plan was to divert the mobsters' attention to himself.

The Falcon planted a news story that he could identify the killers, then sat back to await results. Rizzo was tipped off about where to find Waring, which made him happy.

In the meantime, Kraft Foods cut in with a commercial for its nine different cheese spreads. A good way to make the whole family happy. A different type of family, that is.

Rizzo wasn't happy after he learned he was now the prey. The number of henchmen in active service dwindled, including Rizzo. Dunlap shot him dead to cut any links to himself. Waring and the police began searching for Dunlap, pausing only to hear about the nine cheese spreads.

They found Dunlap. He dived out a window but they were on the third floor, with a concrete sidewalk below. He survived but wasn't going anywhere with multiple broken bones. That wrapped up the case except for an infodump as Waring explained all the loose ends to Mars.

"The Case Of The Superfluous Murder" was written by Jerome Epstein and aired on 1951-02-18. The opening telephone call was from Ginnie. Michael Waring answered the call as The Falcon. He then expressed his regrets, as the case he was involved in concerned a gun with too many bullets in it and a man who had the same problem.

Manufacturer Wesley Endicott came home unexpectedly and found his wife Gail in the arms of another man, named Dennis Fulton. Fisticuffs were exchanged and Wesley got the worst of it from the younger man. Kraft Foods then had the first commercial break, assuring listeners they could enjoy life with cheese spreads on all sorts of food.

Jump cut to Wesley's business place the next morning. Life wasn't going well for him. An angry client named Mayo burst in, shoved his way past the assistant Sheppard, and reproached Wesley because his cheque bounced. He gave him until noon the next day to make good on the cheque and stormed out. Wesley couldn't understand why the cheque bounced.

With troubles galore, Wesley later telephoned The Falcon and asked him to come by the Endicott apartment. Upon arrival, Waring met with a frosty greeting from Gail. She said she was packing to leave but he could see Wesley in his den. He did, but Wesley was dead, slumped over a suicide note written in his own hand.

The police detective Sgt Corbett didn't believe it was suicide because the gun in Wesley's hand was never fired and had a full chamber. Leaving everyone to digest that information, the episode broke for another Kraft commercial, this one extolling the delights of cheese spread on hot biscuits. Life can be beautiful when enjoying delicious food like this straight out of the oven.

The cast brushed the biscuit crumbs off their lapels and continued. They did lots of to-ing and fro-ing between the Endicott apartment and various other places. Mayo was loud and suspicious in his behaviour, enough to justify the police arresting him. Sheppard said Mayo barged into the office, slugged him unconscious, and then ransacked the files.

Corbett and Waring interviewed Gail and tripped her up in contradictory statements. Later Fulton arrived. When he realized they were investigating a murder and not a suicide, he began adjusting his story to shift the blame to Gail. That didn't work, so he dived out a window without opening it first.

Gail was taken to the police station to provide a confession, Mayo was released, and an all-points-bulletin was got out for Fulton. Much ado about everything. Fulton showed up at Waring's apartment waving a gun and asked to hire him. He offered \$500 cash to investigate and the same again if Waring cleared his name. Call it \$5,000 in today's depreciated currency. Waring was a practical man and said: "I don't like you Dennis, but I can't say the same for your money."

Assorted busy work followed until there were only two minutes remaining. At that point, Waring suddenly accused Sheppard of the murder. The assistant had been embezzling money from the company.

When Mayo complained about the bad cheque, Sheppard realized he was about to be exposed. He went over to the Endicott apartment, let himself in through a window, and found Wesley composing a suicide note.

He shot Wesley and departed, not thinking about the fact that Wesley's gun was undischarged. The rest was details. Waring had to explain all the loose ends in a hurry in order to make room for the final cheese commercial.

Philip Marlowe.

THE ADVENTURES OF PHILIP MARLOWE was based on the character created by Raymond Chandler. It aired on radio from 1947 to 1951, changing networks in midstream. The series was slightly darker than most mystery shows, although never as dark as the noir novels upon which it was based.

"The Name To Remember" was written by Mel Dinelli, Robert Mitchell, and Eugene Levitt, and aired on 1949-04-09. Philip Marlowe met a client Eddie

Molette in a tavern. The man said he was being followed. When he tried to go after his stalker the fellow ran away.

After a day with no results, Marlowe went to Molette's house to report. He was ambushed by a muscle-bound goon in a white T-shirt who then left hurriedly. Getting back on his feet, Marlowe searched the house but couldn't find Molette. He did find a girlfriend Ruth Dunn, who was also calling out for Molette.

They eventually found Molette. He had been beaten to death. The house had been searched for some letters that Dunn had written to Molette. Those became the MacGuffin of the story, since Molette's wife Tina could use them in their divorce trial.

Marlowe was about to call the police when the telephone rang. It was a police detective who was surprised to hear Marlowe. He said they were following up the accidental death of a Nevada man Alex Clay.

Clay had been killed by explosives supplied by Molette's company, which he ran in partnership with Lou Tripp, who hadn't been heard from for a while. Probably just a coincidence the police said, but the alert listener will note well that name.

Ruth gave Marlowe an address for Tina, who was handy with a gun and gave him a fright before she departed. Marlowe had noticed a bowling trophy in Tina's apartment. Upon arrival at the bowling alley, he saw a bulletin board displaying photos of league participants, one of which was the goon, muscles, T-shirt, and all. Vic Sawyer by name.

That took him to Sawyer's place, where Tina had preceded Marlowe, apparently in search of the letters. She had just left with them. The two men mostly conversed with fists. Marlowe was the last one standing, then departed with mutual expressions of an unfriendly nature.

Tina's obvious destination was Dunn's apartment. Marlowe heard gunshots as he arrived, but to his surprise it was Tina who was dead. Dunn said she had struggled with her, got her gun away, and shot her. After she sobbed out what happened, Marlowe suddenly thought of Alex Clay for no apparent reason.

Tina had the letters with her. Marlowe browsed through them while Dunn called the police. He hypothesized that Tripp and Clay were the same man.

Only a few minutes remained in the episode, so Marlowe quickly spun a tale about Molette and Tripp cheating each other, and Dunn staging the murder of both Molette and Tina.

Since there was no proof, all Dunn had to do was sob out her story in court and she would be acquitted by self-defence. Instead she grabbed Tina's gun, pointed it at the police and Marlowe, and blabbed all. She and Tripp had been cheating Molette, he in business, and she in romance. Marlowe grabbed the gun out of her hands, having emptied it while Dunn had been on the telephone.

"The Vital Statistic" aired on 1950-03-14, and was written by Robert Mitchell and Eugene Levitt. Philip Marlowe was waiting at a traffic light when a woman hopped into his car, told him she was being followed, and asked him to shake her pursuer. He obliged, making four turns in four traffic lights before parking and asking her to explain.

Marlowe said he was a private detective, which pleased her to learn that. Mrs Terry Lavarr, as she was, said a woman in slacks had been following her for two days. She hired Marlowe to trace the woman.

Lavarr dealt in Chinese silks, not an easy job during the Red Scare. She had two assistants. Harlan Casey handled the cash flow and Joe Temple was the buyer. Casey hated all women (her words) and Temple was her boyfriend. Marlowe asked her the obvious question about her husband. She said she was in the process of divorcing him, Vince by name.

Marlowe did a day's work to no avail. He drove to Terry's house to give her a progress report. The door was opened by the stalker herself, pointing a handgun at him. There were a few contentious moments but she was a better fighter than he was and escaped.

The house had been ransacked. Before Marlowe could locate Terry, her assistant Temple arrived. He checked the house and said the only thing missing was a packet of love letters he had written to her. He suspected Vince. Those letters would be very useful in the divorce trial.

The two men checked the rest of the house and found Terry's body. Marlowe called the police. They knew her name because they had just received a teletype from Oregon police.

A man named Jess Freeman had been killed in a traffic accident up there and was found carrying a huge amount of cash. Her business card was found in his pocket.

Marlowe visited Vince where they had a very unpleasant conversation. A gun was pointed, that sort of thing. Vince ran, while Marlowe investigated the woman in slacks. He got her in her lair and had the landlord hold her at gunpoint until the police arrived.

Marlowe then dashed off to Temple's house where the imminent arrival of Vince was expected. As he got there, gunshots were heard. It was Vince who was dead, shot by Temple in self-defence.

The only question left was Jess Freeman, and Marlowe would not let that go. Freeman was actually Harlan Casey, mixed up with Temple in a complicated scam against Terry. It took the last five minutes for Marlowe to explain away all the loose threads, speaking at high speed in order to cram it all in. A convoluted chronology indeed.

The Saint.

Simon Templar, aka The Saint, began as a series of novels by Leslie Charteris and became successful as a multimedia amateur detective in movies, radio, and television. Templar had no visible means of support, yet lived elegantly.

He was not a professional private detective but either stumbled into situations or had people coming to him for help. The latter never had any difficulty in finding his apartment address or telephone number. Presumably he was listed in the directory, and was not averse to newspaper publicity.

Various radio series of THE SAINT aired between 1945 and 1951. The general consensus was that the seasons featuring Vincent Price were the best. He fit the mould of The Saint perfectly, being cultured and urbane in private life. The dialogue was witty, with so many quips that in several episodes the bad guys were motivated to try and kill him just to shut up all those jests. Well worth listening to. There is a problem with episodes circulating under multiple titles.

"The Sinister Sneeze" was written by Louis Vittes and aired on 1950-06-11. Simon Templar was riding the bus, which seemed a bit downmarket for him. Peggy, a bubbly young woman suffering from a cold, recognized him and

thereby entangled him in the problems of her boyfriend Benny the boxer and his trainer Breckenridge.

Benny had a glass jaw and lost regularly in the ring. When a mobster named Sweeney bet a large sum on Benny, the underworld began buzzing. The fight ended with Benny defeating his opponent Soldier Jones.

Jones never got up from the canvas. Subsequent investigation revealed that chloroform had been applied to Benny's gloves. The idea was to make him groggy and win the fight. Unfortunately Jones suffered a heart attack from the combination of physical trauma and chloroform.

The Saint visited Sweeney's nightclub and found Breckenridge with him. There was an awkward moment. No one knew where to look. Not long after, Breckenridge departed this world in a staged suicide. With some giant leaps, Templar reached the conclusion that Sweeney directed both murders.

The method was elaborate and difficult to believe. There was no proof but Sweeney pulled a gun and bragged about the crimes. Peggy sneezed behind him, distracting him and allowing Templar snatch the gun away. Apparently that made the case for the police. At the very end of the episode, The Saint sneezed. He was coming down with a cold.

"Dossier On A Doggone Dog" was written by Jerome Epstein and aired on 1950-09-24. The episode opened with an announcement that Vincent Price was delayed in Paris, so Barry Sullivan would substitute for him as Simon Templar.

The Saint had found a lost lapdog he named Minerva and decided to have Louie the cab driver follow her to make certain she returned home safely. Templar was worried that if he just turned her loose, she might come to harm. On this premise, the episode was predicated.

Templar and Louie followed Minerva to a wealthy neighbourhood where she turned into the grounds of a 40-room mansion. Much to Templar's surprise, the butler Fitch greeted him by name and told him that Isobel Arridice, the lady of the house, was expecting him. The dog's real name, said the butler, was Ming Toy.

As they walked along the long corridor to the east wing, Templar remarked: "If I'd known the hall was this long, I'd have asked Louie to bring in his cab."

They heard a scream in the distance and ran into a room where the lady was. She was overjoyed to have Ming Toy back. As for the scream, she said she had seen someone peering through the window.

Her next question was if The Saint had her jewels. Before he could say no, her ne'er-do-well son Ernest and husband arrived, drawn by the scream. Hubby was C.J. Arridice, the hardware magnate. Ernest pulled a gun on Templar, who easily disarmed him.

There were no regrets on either side when Templar departed. Or tried to, as the taxicab wouldn't start. While Louie fiddled with the recalcitrant vehicle, the gardener's boy Stevie came up to them. He asked who Templar was. Upon introducing himself, Stevie was in awe: "*The Saint?*". Templar's reputation preceded him everywhere he went.

Stevie wanted Templar to go partners with him and recover \$50,000 in jewels. That provided an opportunity for an infodump about the theft. Templar took the boy inside the mansion, where Isobel Arridice recognized him as the one looking into the window. The bad news was that Ming Toy was missing again.

A search commenced. Stevie saw Ming Toy in the garage, where Fitch was shaving her. Ernest mentioned that the butler had only been working there a fortnight. Stevie led The Saint to the garage but when they got there, Fitch was gone and Ming Toy was shivering in her naked glory.

Fitch was eventually found at the far end of the east wing, quite dead from a knife. "Oh dear, and good butlers are so scarce these days", lamented Isobel. A car chase ensued as Ernest fled the manor. The pursuit ended in the woods. As Templar and Louie tramped about, The Saint explained everything in a loud voice so both the audience and Ernest could hear him.

Ernest had run up gambling debts. First he stole the dog to make it look like professional thieves had done it, they not wanting Ming Toy to bark during the actual jewel theft. Then he killed Fitch and had taken Stevie to do likewise. Both were witnesses to the theft of Ming Toy.

It all ended well for the good guys. The explanation as to why Fitch shaved the dog was too weird to explain here. You'll have to listen to the mp3.

The Shadow.

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.

What was interesting for those days was that she and Cranston were supposedly single and living in different apartments, but they commonly had scenes where they are breakfast or stayed in hotels together. The network executives and sponsors of those times weren't as prudish as often thought.

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 radio series had a complicated genealogy that began in 1930 and didn't evolve the familiar version of The Shadow until 1933. Several dozen episodes are available as free mp3s from 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. Never expect logical plots.

The opening musical theme for the episodes was "Le Rouet d'Omphale" ("Omphale's Spinning Wheel"), composed in 1871 by Camille Saint-Saens. It was beautifully played on the organ and provided an ominous note, in both senses of that word, to introduce the show.

"The Ghost Of Captain Bayloe" aired on 1939-02-05. The shipwreck of the Northern Queen was being investigated by Lamont Cranston. The first mate

told him the ship was off course when the ghost of Captain Bayloe grabbed the helm and steered it into the rocks of a remote island.

The back story was that 20 years ago Bayloe had been sailing by the island when the crew mutinied and threw him overboard. As he drowned, he vowed revenge against all who sailed into the waters. Cranston, accompanied by Margo Lane, took his yacht to have a look. The engine stalled and the ship was pulled toward the rocks.

Assorted alarums replicated the legend. Cranston and Lane went ashore to investigate. They found Bayloe himself, who had survived. There was an entire colony of shipwrecked sailors. Bayloe said they were all slaves labouring in a mine. "Come along and see how dead men live", he said. Cranston liberated them in about five minutes and went after the despot Jenday who ruled them.

The Shadow overheard the evil tyrant and his flunky explaining to each other how they used an assortment of beam rays. One to stop the engines, a magnetic beam to pull the ships ashore, and what we would today call a holographic beam to put the ghost of Bayloe on the victimized ships.

The liberated sailors put Jenday and flunky into one of the dungeons. A passing ship came by and carried everyone away. Cranston explained a few loose ends to Margo and so to the concluding organ music. What I wondered about was what happened to those beam machines. They would have been worth a fortune in the buildup to World War Two.

"Mansion Of Madness" aired on 1939-11-05. Lamont Cranston and Margo Lane were driving out in the country when they had car trouble. They walked to a decrepit castle nearby for help.

This was a standard opening for numerous THE SHADOW episodes. One would think that a wealthy young man about town could afford a new and reliable car, or at least quit driving in remote areas late at night during stormy weather.

Be that as it may, they were greeted by a count and his niece Millicent. Telephone for a garage? Sorry, said the Count. They had no telephone. Nothing new had been added since the castle was built in 1640. I found that difficult to believe. Surely they at least would have installed flush toilets.

The Count was regaling them with horror stories when screams resounded. Millicent was seeing ghosts. The rain was pouring down so Cranston and Lane were invited to stay the night. Every cliché about haunted houses was trotted out. The Shadow visited Millicent that night. She said the ghosts were a constant nuisance, driving her mad. No one else saw them.

Jump cut to the local courthouse, where Millicent had asked Cranston and Lane to testify on her behalf for a sanity hearing. Lane said she didn't like being there, on account of so many criminals loitering about the place. She forgot to mention the lawyers.

Millicent was ordered by the judge to be committed to an institution. Her boyfriend, not previously mentioned, came out of nowhere and objected. He was over-ruled, so The Shadow went to the judge and got a 24-hour delay. Back to the castle for some ghost hunting.

All manner of alarums both inside and outside the castle. Fakery, as the listener expected. Cranston et al caught the ghost and eerie creatures, none of which were real. The Count was trying to take over Millicent's estate. He failed thanks to The Shadow.

Michael Shayne.

Michael Shayne began as a series of novels by Davis Dresser, writing under the pseudonym of Brett Halliday. As a fictional detective, Shayne appeared not only in print but as an old-time radio series, movies, television, and a mystery fiction digest.

Dresser quit writing Shayne stories after 1958 but farmed out the Halliday pseudonym as a house name to other writers, so the stories continued to appear for decades afterwards.

THE NEW ADVENTURES OF MICHAEL SHAYNE aired on old-time radio from 1944 to 1953. The series was based on the novels by Brett Halliday, although the episodes were pastiches.

From 1944 to 1948, Shayne was located in San Francisco and had a pretty secretary named Phyllis Knight. Wally Maher voiced Shayne as a relatively sedate and average detective.

From 1948 to 1950, Shayne lived in New Orleans without a secretary. He was voiced by Jeff Chandler, who narrated the show in tones of rising hysteria, even if he was just crossing the street. That period could best be described as frenetic. Thereafter a variety of forgettable actors portrayed him.

"Dr Grant's Dilemma" was written by Richard de Graafe and aired on 1945-08-13. This episode was set in San Francisco when Michael Shayne could afford a secretary, Phyllis Knight.

Dr Grant (first name never given, always called Doctor) was being blackmailed over her expulsion from medical school years ago. She changed her name and got an MD from a different school. Her husband Irvin was prominent in local politics. The blackmailer John Hunt became his friend and was now asking another \$5,000 from her to keep quiet.

Knight was a patient of Grant, so she promised to get Shayne on the case. The excuse was a party the Grants were hosting. A moment after Shayne and Knight arrived, a shot was heard and Hunt killed. Dr Grant went to pieces and told Shayne and Knight that Hunt was her brother.

The police asked the usual questions. They pulled the package on Hunt and found he had served time for forgery and blackmail. Knight was taken hostage in her apartment by an unknown man.

Shayne and the police easily captured him, then took him to the Grant residence for a J'accuse! meeting. The butler Collins lost his English accent and tried to run for it. Collins, the stranger, and Hunt were all partners in the blackmailing. They had a falling out. Yes, the butler did it.

"Behind The Footlights" was written by Richard de Graffe and aired on 1945-08-27. Michael Shayne and Phyllis Knight were attending a play rehearsal at the request of Beverly Prior. She was an old girlfriend from Shayne's earlier New Orleans days. Knight was quite jealous since Prior was good looking and much younger.

Prior said she thought a murder might be done but before she could give details they were interrupted by Sweeney and Moss, the comedy team. Prior stayed in her dressing room to finish dressing for her dance practice. Shayne and Knight went out front to watch the comedians practice their routine.

They ought not to have done that. Someone stabbed a dancer in the back while she was sitting at her dressing table. She was subsequently identified as Estelle Carol, of the Carol and Hunter dance team. Along the top of the mirror was written in lipstick the letters "beve".

While Shayne and Knight contemplated the clue, the listeners heard about Union 76's new postwar gasoline. (The airdate was three weeks after the atomic bombs.) Guaranteed to pep up your car with 100 octane gasoline.

Back at the murder, the duo discussed the clue with a police detective. Carol was a short woman, and in the lieutenant's experience, people wrote on vertical surfaces at eye level, not above their heads. Further, she was seated when stabbed. A mortally wounded would not stand up to leave a clue. The killer was trying to frame Prior but actually absolved her.

Other clues emerged. Prior wore a locket. A photo inside was missing, torn out. All sorts of jealousies emerged, both professional and amateur. The theatre company was riven by as much melodrama backstage as out on the boards.

The stage magician seemed a culprit but he turned up dead in his hotel room without ever getting a speaking part. Someone had ransacked his room. The deceased was found to have a photograph of a baby, obviously Carol's child. No one knew she had a child or that she was married.

More clues transpired. The epilogue was what convicted Hunter. He and Carol were secretly married and their love child fostered with relatives. That fizzled out at the J'accuse! meeting. Carol's father had died three days before but Hunter withheld the telegrams from her. He wanted to inherit the old man's wealth on the quiet without her or the baby getting into the line of succession.

Sam Spade.

THE ADVENTURES OF SAM SPADE, based on the character created by Dashiell Hammett, aired from 1946 to 1951. It went off the air shortly after both Hammett and Howard Duff, the actor who played Sam Spade, were named as Communist sympathizers during the Red Scare.

The series struggled on for a few more episodes as a sustained show with no advertisers. No corporation dared to be associated with it. The replacement actor couldn't live up to Duff's characterization.

Spade's secretary was Effie Perrine, a scatterbrained young woman who took down his narration in the form of a report. Unlike the movie, where Spade was a serious man, the radio series played him as a happy-go-lucky fellow, sometimes swerving into slapstick.

"The Bow Window Caper" aired on 1947-11-09, and was written by Robert Tallman and Gil Doud. The client was Dr Helmut Reese, who was afflicted by a jealous wife Esther who wanted to ruin him rather than give him a divorce. He was also unnerved by a strange man following him and lurking in the shrubbery.

Sam Spade found himself in a combat zone, as Esther was not a quiet woman. When he visited the doctor's office, she was fighting with the nurse Celeste Robins at full volume. Reese separated the women. Esther left the building and Robin followed soon after giving her notice. There was one patient though, Rose Cavanagh, so Reese asked Spade to wait while he dealt with her.

While sitting in the waiting room reading a 10-year-old NATIONAL GEOGRAPHIC, Spade heard screams and gunshots. He burst into the doctor's office and found him with the dead patient, a woman he said he had just told that she only had a month to live.

Reese said it was suicide after she learned the bad news. Spade noticed there were no powder burns and the pattern of gunshots was physically impossible for a suicide. Nor do such people scream before doing away with themselves. Esther showed up and smiled on learning the news.

Also smiling was the announcer, who cut in with a commercial for Wildroot Hair Oil. He extolled the popularity of Wildroot, which contained soothing lanolin. Hair is dead tissue and doesn't need soothing, but perhaps the copywriter meant the man using the oil.

Spade noticed Esther had dirt on her shoes, as if she had been standing in the flower bed outside the office window. He gave up, left matters to the police, and went home.

Reading the newspaper the next morning, he was surprised to learn the police were seeking Robins. Her fingerprints were on the gun. Another surprise was that Cavanagh's home address on file with the doctor was discovered to be a vacant lot. No one claimed her body from the morgue.

Spade went down to the morgue. As he was chatting with the attendant, a man came in claiming to be Mr Cavanagh. He was the fellow who had been lurking in the shrubbery. From there, Spade went back to his office, where Robins was waiting for him. She protested her innocence and provided an elaborate story.

After a talk, she agreed to surrender to police. Spade dialed the number but got yet another surprise. The lieutenant told him that Esther had just made a full confession.

Trundling to Reese's office, which had the living quarters upstairs, Spade snooped around. A technician showed up to reclaim a dictagraph monitoring system Esther had installed. The microphone was hidden in her husband's office and the recording device upstairs in her bedroom.

The two men found plenty to listen to, including Reese discussing with one of his girlfriends how he murdered Cavanagh. The conversation ended with a gunshot.

Spade rushed downstairs. The gunman was Cavanagh's husband. He said he saw his wife murdered by Reese. He was a lousy shot though, and only grazed Reese. The epilogue cleaned up the loose ends. Also good for loose ends was Wildroot Cream Oil, lauded in the final commercial.

"The Prodigal Panda Caper" was written by Harold Swanton and aired on 1950-12-29. As per the usual format, the episode opened with Sam Spade telephoning Effie Perrine to tell her he would be at the office soon to dictate to her the details of his latest case.

Spade said he had been wandering like a prodigal man. For once, Perrine was smarter than he was. She told him that 'prodigal' did not mean a wanderer as most people think from the biblical story. Rather, it means given to reckless extravagance. The Prodigal Son did indeed wander but that was not why he was called that.

The etymology having been settled, Spade began dictating his report to her. The case began when a young boy Roeby Delaney came to him because someone had stolen his stuffed panda. Spade felt sorry for the boy and so decided to investigate.

Spade went to the department store that sold stuffed pandas in their toy department. The clerk said the store had 25 large pandas that didn't sell over Christmas but that afternoon someone bought them all. He attributed the sale to a new shopgirl who was well endowed and very good at selling to men for some reason.

Poking around, the clerk found one overlooked panda and sold it to Spade. Before he could depart, events began happening. The shopgirl collapsed and died. The floorwalker was most distressed, particularly because it happened in his department. He would have to do the paperwork.

Miss Greenbrier had been wrapping something. Spade noticed the label was addressed to Havana, Cuba. SFPD Homicide was contacted and her medical records checked. They revealed she had a heart condition, so the police called the death as natural causes.

Leaving the store with the panda under his arm, Spade went to Roeby's place. A female store clerk followed him, distracted him, and had a confederate slug him unconscious. When he woke up, needless to say the panda was gone.

Spade's troubles were suddenly taken more seriously by the police when the Greenbrier autopsy report determined she had been poisoned. The floorwalker identified the female clerk as Scarlet Townsend. Spade trudged about gathering plot coupons.

A few more characters were introduced, with several fresh alarums. Spade found a panda abattoir and tied up a few loose ends. One of the culprits had stuffed the panda with unreported currency for onward transmission to Havana. Another stole the cash and replaced it with a bomb. A third culprit stole the panda in hopes of the loot but was instead lifted up into the next world. Happy New Year!

George Valentine.

LET GEORGE DO IT aired on radio from 1946 to 1954, sponsored by Standard Oil for its Chevron stations. The series was about George Valentine, a private investigator. He solicited clients with a running newspaper classified advertisement in the Personals column that he cited in the opening credits: Danger's my stock in trade. If the job's too tough for you to handle, you've got a job for me. Write full details.

Valentine's secretary/girlfriend was Claire Brooks, whom everyone called Brooksie. Her main function was to act as a sounding bound for Valentine and have the plot explained to her at intervals.

"Death Begins At 45" was a 1950 episode written by David Victor and Jackson Gillis. Wendell Mason was a freelance writer who had stumbled across a criminal operating in a suburb and had been slugged unconscious. He wrote for help. George Valentine and Claire Brookes went out to a designated rendezvous along the river.

Instead of meeting him, they met the landlord Tim McNeil who ran them off the land at the point of a rifle. Valentine and Brooksie circled back after McNeil had gone and found a houseboat moored on the riverbank. In it was Rocko Banyon, big-time criminal but no longer after being shot dead from a 45 pistol.

Mason showed up just then, claiming to have seen the perpetrator. The police were next, and found a local resident's body Dr Huntley Reed, also shot dead by a 45 handgun. McNeil had an alibi but confessed that Banyon was his brother.

Reed was apparently murdered because he had seen Banyon's killer. Valentine deduced that Mrs Reed was next. They found her locked inside her house, with Mason bumbling around outside. Valentine ignored the obvious suspect and asked himself why Mrs Reed was still alive. If she was with her husband when they saw the crime, the murderer should have killed her at the same time.

His answer was that she was the murderer of both men. She had accidently learned of Banyon's presence, then used him as a screen to kill her husband in lieu of a divorce. Because the police would keep looking for a gangster suspect, she would be in the clear.

"The Anthill" was written by David Victor and Jackson Gillis, and aired on 1950-05-15. The opening was a hospital where George Valentine, Claire Brooks, and NYPD Lt. Riley gathered around the deathbed of Bill Traylor. He was a slot machine repairman for the rackets and had just been shot six times. If he survived, the hope was he might name Mr Big. Traylor was delirious but mentioned Betty, no surname, before fading out.

Lurking about was Wilton, a legal mouthpiece for the mob and its front, a slot machine manufacturer called The Black Company. Riley and Valentine sparred

verbally with him but got nowhere. As they were exchanging insinuations, the telephone rang at the nurses' station.

No nurse was around at the moment. A nervous woman wanted to know about Traylor's condition. Brooksie tried to pose as a nurse but the caller rang off in a panic. The police managed to trace the call to an apartment building known to police as The Anthill.

Valentine talked to a bartender in a tavern on the ground floor of the building. Other than the name Betty re-appearing and mention of a torpedo named Louie, he got nothing else. Brooksie tried her own method of espionage and learned Betty and Louie were siblings.

Many excursions followed as all and sundry tried to find Mr Black, who was apparently courting Betty incognito. Valentine succeeded in locating Black's penthouse and snooped about. No one had ever seen Black, so when Louie showed up with the monthly payout from the machines, he accepted Valentine as Mr Big.

Louie said Traylor had been fixing the slot machines and splitting the proceeds with the local bartenders. However he denied shooting Traylor. He gave himself away as a liar when he said he didn't know who had emptied a revolver into Traylor. The police hadn't publicized that information.

At that opportune moment Betty arrived. A three-way argument erupted, broken up by the arrival of Wilton, who said he was the real Black. Louie departed this world by the gun of Wilton qua Black. The shot brought the police running and the excitement to an end. The denouement was a twist when Traylor was revealed to be the real Mr Big.

Philo Vance.

The PHILO VANCE series aired on old-time radio from 1945 to 1950, based on the novels by S.S. Van Dine. Script writers were not credited. The detective was also found in a series of movies. Philo Vance was a know-it-all amateur sleuth, a wealthy man who moved in high society.

In the radio series he was usually asked by District Attorney John Markham to investigate, as apparently the local police could not be trusted to find the killer. Markham frequently came out and did field investigations, something a real

D.A. would not do. The police occasionally appeared but usually just the two men brought in the culprit. Markham narrated the second half of each episode, after the commercial break.

Henry Sylvern was the berserk organist who supplied incidental and segue music. He continually outdid himself with staccato outbursts and crescendos for each scene change. Some of the episodes are worth listening to just for him.

"The Rhumba Murder Case" aired on 1948-12-28. Sally Henderson was secretary to District Attorney John Markham. She was trying to sign up for dance lessons. The owner Rosita Ortega became reluctant to take her on as a student when Henderson told her about her job.

Ortega's life was further complicated when, during the interview, she received a telephone call from Renaldo, a dance instructor she had just fired. He wasn't going to take no for an answer. Henderson had the hearing of a cat and apparently heard what was said. She said she would bring the threats to Markham's attention.

Another problem Ortega faced was an amorous student named Jack Cummings who foolishly wrote love letters to her. She was tired of his advances, so she told him the letters would be shown to his wife unless he proved how much they were worth to him in dollars.

Yet another problem was rival studio owner Margaret Stone, alias Senorita Ramone. A nasty rivalry, to the point of a knife fight. Ortega recognized her as a phony with a fake Spanish accent. All told, a long list of suspects for Ortega's murder, stabbed to death late at night in her studio. Vance and Markham to the scene to question all the suspects.

Markham leaped to conclusions like a shumka dancer and decided each suspect he talked to was guilty. None of this business of gathering evidence first and then fitting a suspect to the crime.

Renaldo said he had seen Ortega reading letters, probably those of Cummings, and probably the real reason he was fired. He said the letters were in her desk, but when it was searched they were gone.

Vance romanced a taxi dancer named Mary Morgan who said Renaldo had been with her at the Shadowland dance hall at the time of the murder. As Vance was

doing that, Stone visited Cummings to extort him for \$10,000. He threw her out then decided to commit suicide. Vance arrived in time to stop him. The next stop was back at Shadowland for a chat with the owner.

From there, Vance made his own leap. He accused Renaldo. The reasoning was that Morgan's alibi had a hole in it. So did Vance's supposition, but once again the guilty party confessed instead of staying quiet.

"The Magic Murder Case" aired on 1949-01-04. Pop Baker was a constructor of devices for stage magicians. The Great Mento was a sharp practice magician, whom Baker blamed for destroying his stage career by exposing how his tricks worked.

Mento's assistant Betty Anderson was unhappy because he wouldn't marry her. She said she had another string in her bow, Johnny Davis. Mento wasn't bothered and told her to go ahead and marry Davis.

To no one's surprise, Mento was murdered in his dressing room, a knife in his back. Philo Vance and John Markham were the ones who found the body. This was a locked room mystery. The two had to break down the locked door and there was no other exit for the murderer.

Vance called upon Baker, who was not grieved at the news. Indeed he obliquely implied he probably committed the offense, and threw out a challenge. Markham interrogated Anderson but got nothing substantial.

All the characters criss-crossed between venues. Anderson went to Baker and asked him to build something for her. The case was solved when Vance realized there was an escape cabinet in Mento's dressing room. The killer hid there and out-waited others.

Anderson confronted Davis and accused him of the murder. He tried to kill her but was interrupted by the opportune arrival of Vance. There followed a lengthy exposition by Vance on how the murder was done, substantiated by Davis's confession. Davis actually spouted that old cliché "What's more, I'd do it again if I had the chance." An exact quote.

Mr Keen.

MR KEEN, TRACER OF LOST PERSONS aired on old-time radio from 1937 to 1955. It was a soap opera style mystery show, produced by Frank and Anne Hummert, who at one time owned 40% of all radio series being aired during the Golden Age of radio.

They were all soap operas except for MR KEEN. The series was credited as written by Frank and Anne Hummert but actually done by a stable of house writers. The series was so over the top that for years afterwards Bob Elliott and Ray Goulding on their comedy show did a parody titled "Mr Trace, Keener Than Most Persons".

As the series progressed, Keen did fewer missing persons cases and more just plain murders. Mike Clancy was added as his assistant, with a phony stage Irish accent straight out of vaudeville. By the series demise in 1955, it was a straightforward mystery series.

"The Poisoned Sandwich Murder Case" aired on 1951-08-17. The telephone rang in Keen's office. The client was Stewart Blair, who was in a tizzy. Before he could say why, he gasped, made a strangled sound, and the conversation was terminated.

Blair had give Keen and Mike Clancy his address just before he keeled over, so they rushed there and found him dead on the floor. There was a half-eaten sandwich on the table beside the telephone. Keen caught the scent of a chemical in the sandwich. He hurried past that clue before listeners could ask themselves why Blair hadn't smelled it as well.

Clancy called the police while Keen snooped about and found a framed photograph of a woman named Lenora Barkley. As they pottered around the dead man's apartment, a young woman named Joy Harmes arrived. She was distraught, as a girlfriend should be, but the question arose about the photo of Barkley and her relationship with the deceased.

Leaving the police at the crime scene, they visited Barkley in her office. She said she had been financially supporting Blair. She then became ill as she spoke to them. Keen deduced that a bottle of water on her desk was poisoned, although he hadn't seen her actually drink from it.

It was the same chemical that killed Blair but again the duo ignored the obvious point. If they could smell the chemical, the listener had to wonder why Barkley didn't notice it in her water bottle. She survived but Keen deduced she hadn't ingested any poison and was shamming. She tried to shift the blame by saying Harmes had been her only visitor at her office that morning and must have poisoned the water.

Keen caught her out in a couple of inconsistencies. Barkley kept changing her story to fit newly discovered facts. The background finally came out. She had supported Blair and financed him through law school. He threw her over and announced he was marrying Harmes.

The rest was details, mostly blabbed by Barkley, who should have kept her mouth shut. The recriminations tainted everyone and made for an ugly ending.

"The Rented Cottage Murder Case" aired on 1952-04-03 as an example of a convoluted plot. It began simply with a young couple, Tom and Jenny Haines. They were with a rental agent named Orville Burkett looking at a sizeable cottage, filled with antique furniture and positively gleaming.

Burkett told them the rent was \$25 per month, which even in 1952 was incredibly cheap for the quality. He explained that there had been a murder in the cottage a year ago, the owner's husband Herbert Lorraine. The widow couldn't get potential tenants interested at any price, despite the blood having been scrubbed away.

The Haines decided that beggars couldn't be choosers and took the lease. Tom was on crutches and was unemployed. He had been a traveling salesman for an import-export company. Tom had been on a business trip to Canada when he slipped and fell on the ice. Well, yes he would, wouldn't he. One of the hazards of visiting the Great White North.

Tom lost his job and the couple were in dire financial straits. Tom said he had found the cottage advertised somewhere and suggested it to reduce expenses. They hadn't time to unpack before Tom was murdered.

She was elsewhere in the cottage when someone Tom recognized entered him and shot him dead. Jenny hired Mr Keen and Mike Clancy to find the killer. As usual, no one had any confidence in the police.

Keen and Clancy visited the cottage. They found Burkett searching the bedroom for something. He said he was looking for Tom's crutches, which had disappeared between his murder and the arrival of the police. Burkett suspected Jenny of the murder, and Clancy replied he suspected Burkett.

The agent said he had never seen the Haines couple until they arrived for the viewing. As for him snooping about, he said he was waiting for the widow Lorraine and decided to occupy his time fruitfully.

Burkett said her husband operated an import-export company, specializing in surgical supplies and crutches. He said that Herbert Lorraine was sympathetic to cripples, who would visit him at the cottage for new crutches.

The widow arrived and mentioned in passing that Tom Haines had worked for her husband before losing his job. Burkett denied knowing that and insisted he had never met Tom until he and Jenny came to look at the cottage.

Keen took the widow aside privately for more details. She said Herbert had sold the company to Ambrose Carter before his death. Keen and Clancy therefore departed to the warehouse to talk to Carter. That man said he was surprised to learn from them that Tom had been murdered.

Carter denied having fired Tom and said the deceased had quit voluntarily. When Keen asked to look at some of the crutches, Carter refused and the interview was terminated. On his way out, Keen secretly appropriated a sympathy card intended for the widow Jenny. Yet Carter claimed he hadn't known about Tom's death.

Keen and Clancy returned to their office. Shortly after Jenny arrived. She told them Burkett had threatened her to remain silent about Tom's crutches, followed shortly by Carter telling her to stay away from the cottage, which had been ransacked.

Notwithstanding the threats, Keen set up a J'accuse! meeting at the cottage. Surprisingly the police were invited. Burkett and Carter went at each other's throats when Keen explained the hollow rods of the crutches were used to smuggle narcotics.

Mrs Lorraine was the leader of the gang. Keen began shoveling out previously undisclosed information, such as her prior convictions for drug trafficking.

Until now she had spoken in a cultured voice, but suddenly began yammering in a Noo Yawk accent like a gangster's moll.

The cripples who visited the cottage were her pushers come to get a supply and smuggle them into the city inside the crutches. Herbert didn't know and when he found out, she murdered him. A year later, Tom Haines tried to shake her down and became her second victim. Burkett and Carter were her accomplices. Everybody was guilty except Jenny.

Jack Webb.

Before he was vaulted to national fame as Sgt Joe Friday in DRAGNET, Jack Webb served an apprenticeship in several private detective radio series. He generally played a harsh man among harsh people, crime noir relieved only by a constant flow of exaggerated similes and sarcastic remarks.

The first of these was PAT NOVAK, FOR HIRE, which aired from 1946 to 1947 and a brief revival in 1949. This series was mostly written by Richard Breen. The grimness was unrelieved. Webb later toned down his performance for DRAGNET and played Joe Friday as a polite man.

"Marcia Halpern" aired on 1949-02-27. Pat Novak was accosted by a young woman who said she had amnesia. He took her to a coffee shop, bought her a cup, and watched her collapse dead onto the floor. She had been poisoned with sleeping pills.

The initial identification was Marcia Halpern, who had been reported missing eight years ago. By a coincidence which no one believed was a coincidence, her father Emery was killed in a suspicious car crash a few hours before she died. Novak learned that Emery's lawyer Mark Taylor had been named his sole heir in a new will just recently executed.

The plot became more complicated. The deceased woman was re-identified as Helen Dupré. Taylor had hired her as a ringer for Marcia with the idea of convincing the old man that his prodigal daughter had returned. She would then inherit after the non-accidental car accident, then split the estate with Taylor.

Once Taylor learned of the new will, Dupré became superfluous and was helped off stage by dosing her with the pills in her food or drink. Unfortunately for him, his girlfriend Hilda Travers learned the details and cut herself in for half

the estate. Taylor was right back where he started, which was most annoying. Novak figured out who would be next to leave this world and with the police went to Travers' apartment.

Alas, they walked in as Taylor shot her dead. California had the death penalty in those days, so Taylor would be the final supporting actor to be thinned out. Everyone else but Novak and the police having died, the episode concluded.

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 Etobicoke, Ontario 2021-05-03

OPUNTIA 498: I think I may be interested in some of the programming of When Words Collide 2021 when it comes around. Just had a look at the programming chart for this year's WWC, and it looks like every day at 10 a.m. might be good for me.

[For those who might like to view the event free online, keep an eye on www.whenwordscollide.org]

I am not writing anything these days, except for letters of comment, but I have certainly been mostly into editing. Right now, I am editing a Young Adult novel, written by former AMAZING STORIES editor-in-chief Ira Nayman. I hope I can do it justice.

I have been on a few Zoom sessions, and one day, I had three, which is just too much. Tonight is Graeme Cameron's weekly Zoom session, and I really should get to that more often. I suspect I know the topic of discussion tonight, the recently announced Winnipeg in 2023 Worldcon bid.

[Looking back at my 2020 calendar, I see that I attended two WWC panels per day online, whereas at the real-world WWC 2019, I was at six events per day.]

However we deal with anti-vaxxers, we also have anti-maskers to deal with here. We get demonstrations by the anti-maskers here, and looks like you have maskless rodeos. I am not sure how we fix that;. People will demand their liberties and freedoms without realizing they also have responsibilities.

[I just read a history of the 1918 pandemic in Alberta and everything was exactly the same way. Good compliance for the first lockdown, incessant whining and complaining during the second wave, and outright defiance during the third wave. That pandemic lasted from 1918 March to 1919 December, and it seems certain that the same amount of time will lapse for COVID-19.]

OPUNTIA 499: I should say that the stamps in this issue and the last looked great. I just have other things to do, and the collection lies on the shelf, gathering dust. I especially liked the stamp with the value of 60,000 Guinean francs on it. Looks like there's some serious inflation going on there. Same goes with the stamps from Sierra Leone. I wonder if anyone has sent Dr. Fauci some of those stamps?

[I looked it up on Google and as of May 3, the Guinean franc traded at 0.00012 Canadian dollars.]

[Re: Calgary new free magazine] Toronto also has few if any free magazines and tabloids. I don't use public transit much these days, but I remember when getting to the subway, I had my choice of two subway newspapers, and two entertainment papers. I gather that only one entertainment paper, NOW, is left, and it only seems to be distributed in the heart of Toronto. I don't see it in Etobicoke.

If there are any stores opening in this pandemic, they are cannabis shops, and they are everywhere.

[I think Calgary has all the cannabis shops it will ever have, since they are regulated by the provincial government in accordance with the federal law that made the stuff legal. For my non-Canadian readers, imagine that your marijuana supply was as legal as tobacco and alcohol, but the catch was that you had to go to your DMV to buy some.]

SEEN IN THE LITERATURE

Ricarte, A., et al (2021) **Origins and demographics of wandering black holes.** MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY 503:doi.org/10.1093/mnras/stab866

Authors' abstract: We characterize the population of wandering black holes, defined as those physically offset from their halo centres, in the ROMULUS cosmological simulations. Unlike most other currently available cosmological simulations, black holes are seeded based on local gas properties and are permitted to evolve dynamically without being fixed at halo centres.

Tracking these black holes allows us to make robust predictions about the offset population. We find that the number of wandering black holes scales roughly linearly with the halo mass, such that we expect thousands of wandering black holes in galaxy cluster haloes.

Locally, these wanderers account for around 10 per cent of the local black hole mass budget once seed masses are accounted for. Yet for higher redshifts, wandering black holes both outweigh and outshine their central supermassive counterparts. Most wandering black holes, we find, remain close to the seed mass and originate from the centres of previously disrupted satellite galaxies.

While most do not retain a resolved stellar counterpart, those that do are situated farther out at larger fractions of the virial radius. Wanderers with higher luminosities are preferentially at lower radius, more massive, and either closer to their host's mid-planes or associated with a stellar overdensity.

This analysis shows that our current census of supermassive black holes is incomplete and that a substantial population of off-centre wanderers likely exists.

Tsuchiyama, A., et al (2021) **Discovery of primitive CO₂-bearing fluid in an aqueously altered carbonaceous chondrite.** SCIENCE ADVANCES 7:doi.org/10.1126/sciadv.abg9707 (available as a free pdf)

[Chondrites are a type of meteorite whose parent body never underwent melting or metamorphosis, thus preserving the original materials that formed the body billions of years ago. This meteorite fell in 2012 near Sutter's Mill, California.]

Authors' abstract: Water is abundant as solid ice in the solar system and plays important roles in its evolution. Water is preserved in carbonaceous chondrites as hydroxyl and/or H_2O molecules in hydrous minerals, but has not been found as liquid.

To uncover such liquid, we performed synchrotron-based x-ray computed nanotomography and transmission electron microscopy with a cryo-stage of the aqueously altered carbonaceous chondrite Sutter's Mill. We discovered CO_2 -bearing fluid $(CO_2/H_2O > \sim 0.15)$ in a nanosized inclusion incorporated into a calcite crystal, appearing as CO_2 ice and/or CO_2 hydrate at 173 K.

This is direct evidence of dynamic evolution of the solar system, requiring the Sutter's Mill's parent body to have formed outside the CO_2 snow line and later transportation to the inner solar system because of Jupiter's orbital instability.

Viennet, J.C., et al (2021) Martian magmatic clay minerals forming vesicles: Perfect niches for emerging life? ASTROBIOLOGY 21:doi.org/10.1089/ast.2020.2345 (available as a free pdf)

Authors' abstract: Mars was habitable in its early history, but the consensus is that it is quite inhospitable today, in particular because its modern climate cannot support stable liquid water at the surface.

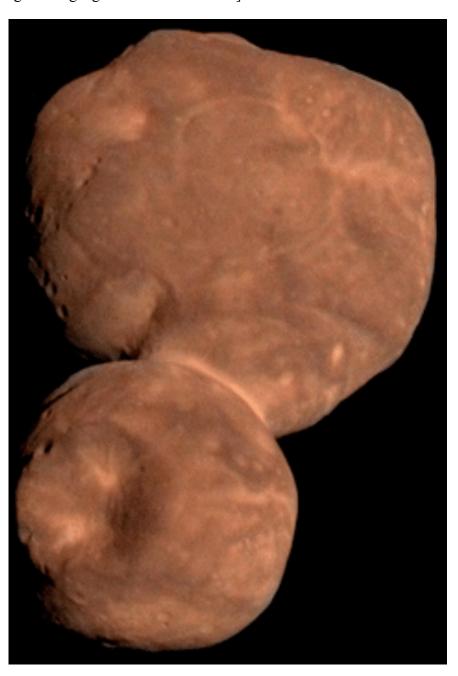
Here, we report the presence of magmatic Fe/Mg clay minerals within the mesostasis of the Martian meteorite NWA 5790, an unaltered 1.3 gigayears old nakhlite archetypal of the Martian crust.

These magmatic clay minerals exhibit a vesicular texture that forms a network of microcavities or pockets, which could serve as microreactors and allow molecular crowding, a necessary step for the emergence of life.

Because their formation does not depend on climate, such niches for emerging life may have been generated on Mars at many periods throughout its history, regardless of the stability or availability of liquid water at the surface.

Katz, J.I., and S. Wang (2021) **Arrokoth's necklace.** MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY 504:601-609

[Arrokoth was the asteroid originally known as Ultima Thule but that name was considered politically incorrect so it was changed to a word from an extinct aboriginal language in the eastern USA.]



Authors' abstract: Fly-by images of (486958) Arrokoth (Ultima Thule, 2014 MU_{69}) show a comparatively bright 'necklace' in the neck, or cleft, between its two lobes, in contrast to its generally low albedo. We suggest that the necklace may be the result of thermally controlled ice deposition.

The necklace is found in the most (orbitally averaged) shaded part of the surface. It may consist of clean, high albedo, ice condensed from vapour sublimed by dirty, low albedo, ice elsewhere. Ice accumulates where the maximum temperatures are the lowest.

Ammonia and propane have the necessary mesovolatile vapour pressure. Surrounding gas in the proto-Solar system would facilitate redeposition of molecules sublimed by warmer parts of the surface into the cleft, as well as smoothing the surface and explaining, by hydrodynamic drag, Arrokoth's slow (compared to its break-up rate) rotation. Alternatively, a layer of hoarfrost thick enough ($> 0.1\mu$) to have a high albedo could have formed more recently.

[Image is from NASA]

DasSarma, S., and E.W. Schwieterman (2021) **Early evolution of purple retinal pigments on Earth and implications for exoplanet biosignatures.** INTERNATIONAL JOURNAL OF ASTROBIOLOGY 20:doi.org/10.1017/S1473550418000423 (available as a free pdf)

Authors' abstract: We propose that retinal-based phototrophy arose early in the evolution of life on Earth, profoundly impacting the development of photosynthesis and creating implications for the search for life beyond our planet. While the early evolutionary history of phototrophy is largely in the realm of the unknown, the onset of oxygenic photosynthesis in primitive cyanobacteria significantly altered the Earth's atmosphere by contributing to the rise of oxygen ~2.3 billion years ago.

However, photosynthetic chlorophyll and bacterio chlorophyll pigments lack appreciable absorption at wavelengths about 500 to 600 nm, an energy-rich region of the solar spectrum. By contrast, simpler retinal-based light-harvesting systems such as the haloarchaeal purple membrane protein bacteriorhodopsin show a strong well-defined peak of absorbance centred at 568 nm, which is complementary to that of chlorophyll pigments.

We propose a scenario where simple retinal-based light-harvesting systems like that of the purple chromoprotein bacteriorhodopsin, originally discovered in halophilic Archaea, may have dominated prior to the development of photosynthesis. We explore this hypothesis, termed the 'Purple Earth,' and discuss how retinal photopigments may serve as remote biosignatures for exoplanet research.

There is wide agreement that anoxygenic photosynthesis preceded oxygenic photosynthesis, though the length of the interval for this transition is uncertain. Some geochemical proxy records suggest that the earliest oxygenic photosynthesizers may have appeared by ~2.9 to 3 gigayears ago with geochemical sinks arresting oxygen's accumulation for a time.

Ultimately, because of oxygenic photosynthesis and additional, poorly understood factors, the Earth experienced a Great Oxidation Event about 2.3 billion years ago, which indelibly altered the prevailing chemical conditions of our planet's atmosphere.

Early microorganisms employing retinal pigments for generating metabolic energy may have dominated, as halophilic Archaea do today in hypersaline environments, providing a scenario which may serve to guide our search for detectable biosignatures on other worlds.

Geochemical and fossil evidence indicate that life arose soon after the Earth formed, with many key evolutionary inventions following: cellularity, chemiosmotic coupling, genetic code, phototrophy, respiration and photosynthesis.

Light-driven proton pumping by retinal proteins are hypothesized to have evolved during this early stage in evolution. The last universal common ancestor predated the divergence of life into three Domains: Archaea, Bacteria and Eukarya.

The rise of anoxygenic and then oxygenic photosynthesis allowed the productivity of Earth's microbial biosphere to increase immensely. The Great Oxidation Event followed, about 2.3 billion years ago and led to the development of multicellularity and evolution of higher life forms.

Moczydlowska, M., et al (2021) Ediacaran metazoan fossils with siliceous skeletons from the Digermulen Peninsula of Arctic Norway. JOURNAL OF PALEONTOLOGY 95:440-475 (available as a free pdf)

Authors' abstract: In this study, a new assemblage of Ediacaran metazoan fossils is reported from the basal Stáhpogieddi Formation on the Digermulen Peninsula of Arctic Norway, including Anulitubus n. gen. [new genus], Anulitubus formosus n. gen. n. sp. [new species], Coniculus elegantis n. gen. n. sp., Fistula n. gen. in Moczydlowska et al., and Fistula crenulata n. gen. n. sp.

The specimens are three-dimensionally preserved and include tubular and conical skeletons that are morphologically distinguished by their body-wall constructions, radial symmetry, polarity, segmentation, and annulation.

The skeletons are interpreted to be biomineralized by primary silica based on computed micro-tomographic, petrographic, geochemical, and spectroscopic evidence of originally rigid body wall with layers of constant thicknesses, composed of opal, microcrystalline quartz, and an admixture of carbonaceous material, which differ from the host sediment mineralogy and do not show replacement or encrustation.

The fossil-bearing interval immediately overlies strata of Gaskiers age and can be bracketed within 580 to 541 megayears ago, but it is estimated to be ca. 575 Ma on the basis of averaged sedimentation rates and biostratigraphic correlations with Ediacaran biota found in up-section deposits of ca. 558 to 555 Ma.

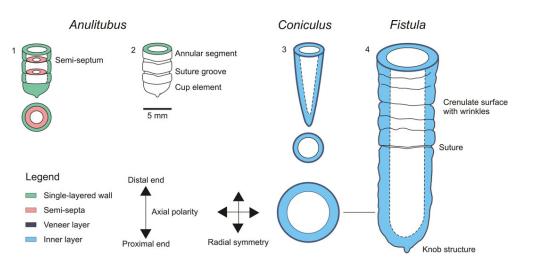
Future new findings of such fossils in different preservation modes and further multi-collector inductively coupled plasma mass spectrometry, which shows the silicon fractionation and traces its biogenic origin versus inorganic mineralization, may corroborate the interpretation of biogenic silicification of these earliest skeletal fossils.

The early evolution of animals, or metazoans (Metazoa), can be traced back to the Ediacaran Period (635 to 541 Ma) based on the fossil record of macroscopic soft-bodied impressions, carbonaceous compressions, and subsequently mineralized and organically preserved organisms. However, a more ancient metazoan origination event has been inferred using molecular clocks, which suggests emergence times ranging from between 833 to 650 Ma, to a more specific point estimate of up to 780 Ma.

The affinities of the various Ediacaran metazoan taxa are likewise unresolved and are often contested because of their unusual morphologies and lack of unambiguous diagnostic features in comparison to modern phyla. These have resulted in assorted identifications including sponges, placozoans, cnidarians, lophophorates, and putative bilaterian metazoans.

The preserved remains of Ediacaran metazoans seem to represent body tissues that were largely composed of soft organic matter, although calcified skeletons had appeared by ca. 550 Ma. The onset of metazoan mineralization is a precursor to the independent acquisition of biomineralized skeletons and of different mineralogies by multiple metazoan clades, an important feature of the Cambrian Explosion (541 to 485 Ma).

[Image is from this paper.]



Lu, M., et al (2021) A synthesis of the Devonian wildfire record: Implications for paleogeography, fossil flora, and paleoclimate. PALAEOGEOGRAPHY, PALAEOCLIMATOLOGY, PALAEOECOLOGY 571:doi.org/10.1016/j.palaeo.2021.110321

[The first forest fires obviously could not occur until woody plants (lignophytes) evolved into trees during the Devonian era 416.0 to 358.9 mya.]

Authors' abstract: This study synthesizes the Silurian-Devonian wildfire record for the first time. High wildfire frequencies occur in eastern Euramerica during the Famennian. This high-frequency pattern is coined as the 'Famennian Wildfire Explosion' (FWE).

The paleowildfire occurrence shows a clear co-evolutionary pattern with the lignophyte radiation. The FWE event tends to correspond to the early forestation and arid climate zone instead of the pO_2 level.

The Devonian is known for the earliest dispersal of extensive wildfires, but the spatiotemporal diversification pattern and process have not been studied in detail. We synthesize a total of 65 global wildfire occurrences based on fossil charcoals and geochemical (biomarker) evidence from 10 paleogeographic areas across 10 time bins (Lochkovian-late Famennian).

Stratigraphically, the highest number of wildfire occurrences is found in the Late Devonian, especially the late Famennian. Paleogeographically, Devonian wildfire evidence is highly concentrated in the eastern Euramerican region that consists of the Appalachian Basin, Avalonia, and Baltica along the Acadian landmass.

These data collectively define a unique diversification pattern, here coined as the FWE. This possible global wildfire spread, based on our diversity analysis of the plant fossil record in eastern Euramerica, is tightly corresponding to the paleogeographic distribution of lignophytes, but not to other common groups of Late Devonian woody plants (e.g., lycopodiopsids, spermatophytes, pteridophytes-monilophytes).

Those lignophyte trees and shrubs include 34 species of Aneurophytales, Archaeopteridales, and Spermatophytes in the eastern Euramerican area that represent the primary forest component as the major fuel source of the FWE.

By comparing our wildfire and fossil plant diversity with available paleoclimate data (e.g., global atmospheric oxygen level, paleohumidity), we suggest that the FWE in eastern Euramerica is unique due to a combination of occurrences

- (i) in a relatively low paleolatitudinal zone and
- (ii) in arid and warm temperate climate zones, but it shows
- (iii) a relatively weak correlation with the rapidly increasing atmospheric oxygen level.

Viglietti, P.A., et al (2021) **Evidence from South Africa for a protracted end-Permian extinction on land.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 118:doi.org/10.1073/pnas.2017045118

[The end-Permian extinction 251 megayears ago was the greatest mass extinction on Earth. 97% of all species went extinct due to over-heating of the planet by flood lavas.]

Authors' abstract: Mass extinctions permanently altered life's evolutionary trajectory five times in Earth's history, and the end-Permian extinction was the greatest of these biotic crises. South Africa's unparalleled fossil record provides a window into mass extinction dynamics on land. We analyze a unique dataset comprising hundreds of precisely positioned tetrapod fossils, identifying a protracted (~1 Ma) extinction.

This contrasts with the rapid marine extinction, demonstrating that the effects of biotic crises vary prominently among Earth's surface environments. We also identify the blooming of "disaster taxa" before the main extinction rather than in its aftermath as assumed previously.

These changes contributed to breaking the incumbency of previously dominant mammal relatives (synapsids) after the extinction and to the Triassic rise of crocodile- and dinosaur-line archosaurs.

Earth's largest biotic crisis occurred during the Permo—Triassic Transition (PTT). On land, this event witnessed a turnover from synapsid- to archosauromorph-dominated assemblages and a restructuring of terrestrial ecosystems. However, understanding extinction patterns has been limited by a lack of high-precision fossil occurrence data to resolve events on submillion-year timescales.

We analyzed a unique database of 588 fossil tetrapod specimens from South Africa's Karoo Basin, spanning ~ 4 My, and 13 stratigraphic bin intervals averaging 300,000 y each. Using sample standardized methods, we characterized faunal assemblage dynamics during the PTT. High regional extinction rates occurred through a protracted interval of ~ 1 Ma, initially co-occurring with low origination rates.

This resulted in declining diversity up to the acme of extinction near the Daptocephalus-Lystrosaurus declivis Assemblage Zone boundary. Regional

origination rates increased abruptly above this boundary, co-occurring with high extinction rates to drive rapid turnover and an assemblage of short-lived species symptomatic of ecosystem instability.

The "disaster taxon" Lystrosaurus shows a long-term trend of increasing abundance initiated in the latest Permian. Lystrosaurus comprised 54% of all specimens by the onset of mass extinction and 70% in the extinction aftermath. This early Lystrosaurus abundance suggests its expansion was facilitated by environmental changes rather than by ecological opportunity following the extinctions of other species as commonly assumed for disaster taxa.

Our findings conservatively place the Karoo extinction interval closer in time, but not coeval with, the more rapid marine event and reveal key differences between the PTT extinctions on land and in the oceans.

Kobayashi, Y., et al (2021) A new basal hadrosaurid (Dinosauria: Ornithischia) from the latest Cretaceous Kita-ama Formation in Japan implies the origin of hadrosaurids. SCIENTIFIC REPORTS 11:doi.org/10.1038/s41598-021-87719-5 (available as a free pdf)

[Hadrosaurs were giant bipedal herbivorous dinosaurs.]

Authors' abstract: Here we describe a partial hadrosaurid skeleton from the marine Maastrichtian Kita-ama Formation in Japan as a new taxon, Yamatosaurus izanagii gen. et sp. nov., based on unique characters in the dentition. Our phylogenetic analysis demonstrates Yamatosaurus izanagii belongs to Hadrosauridae, composed of Hadrosaurus foulkii + (Yamatosaurus izanagii + (Saurolophinae + Lambeosaurinae)).

The coracoid lacks a biceps tubercle as in non-hadrosaurid hadrosauroids, suggesting its presence is a key feature for the clade of Saurolophinae and Lambeosaurinae. The evolutionary rates analysis further supports that shoulder and forelimb features, which are likely to have been involved in locomotion, were important for the early evolution of Hadrosauridae.

Our biogeographic analyses show that basal hadrosaurids were widely distributed in Asia and Appalachia, that the clade of Saurolophinae and Lambeosaurinae originated in Asia, and that eastern Asia may have served as a refugium of relict hadrosauroid taxa such as Plesiohadros djadokhtaensis,

Tanius sinensis, and Yamatosaurus izanagii during the Late Cretaceous. The contemporaneous occurrence of basal (Yamatosaurus izanagii) and derived (Kamuysaurus japonicus) hadrosaurids during the Maastrichtian in Japan is the first record in Asia.

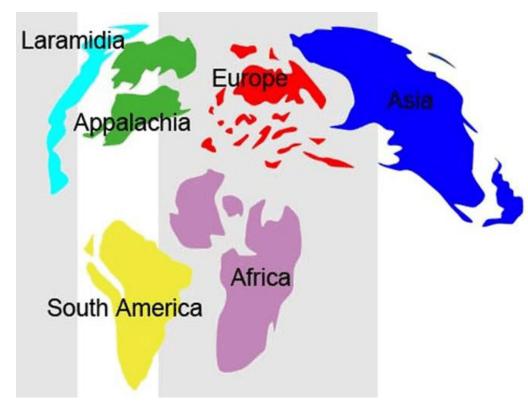
Because of the long geographical distance between these localities, they likely did not co-exist, but instead demonstrate some level of provinciality. Hadrosauroids were successful herbivorous ornithischian dinosaurs during the Cretaceous.

The fossil record of known basal hadrosauroids is mainly from the Lower Cretaceous deposits of Europe and eastern Asia, whereas derived forms are known from the Upper Cretaceous rocks of all continents except Australia and the Indian subcontinent.

Hadrosaurids were successful in both abundance and cosmopolitan distribution that included the ancient Arctic. The high diversification of hadrosaurids is attributed to their efficient oral processing system, established by specialized dentitions with complex grinding surface together with cranial kinetics. Social behaviors, expressed by their unique supracranial crests, are also likely to have contributed to the success of the derived hadrosauroids.

[Image and map are from this paper. Earth looked very different then.]





Wyeth, R.C., et al (2021) Rare-earth magnets influence movement patterns of the magnetically sensitive nudibranch *Tritonia exsulans* in its natural habitat. BIOLOGICAL BULLETIN 240:105-117

Authors' abstract: The nudibranch Tritonia exsulans (previously Tritonia diomedea) is known to have behaviors and neurons that can be modified by perturbations of the Earth's magnetic field. There is no definitive evidence for how this magnetic sense is used in nature.

Using an exploratory approach, we tested for possible effects of magnetic perturbations based on underwater video of crawling patterns in the slugs' natural habitat, with magnets of varying strength deployed on the substrate.

For analysis, we used a paired comparison of tracks of animals between segments 25–50 cm distant from the magnets and segments of the same tracks 0–25 cm from the magnets, to determine whether any differences depended on the strength of the magnet.

Most track measurements (length, displacement, velocity, and tortuosity) showed no such differences. However, effects were observed for the changes in track headings between successive points. These results showed that tracks had relatively higher heading variability when they moved closer to stronger magnets.

We suggest that this supports a hypothesis that T. exsulans continuously uses a magnetic sense to help maintain straightline navigation. Further specific testing of the hypothesis is now needed to verify this new possibility for how animals can benefit from a compass sense.

Fannin, L.D., et al (2021) Carbon and strontium isotope ratios shed new light on the paleobiology and collapse of *Theropithecus*, a primate experiment in graminivory. PALAEOGEOGRAPHY, PALAEOCLIMATOLOGY, PALAEOCCOLOGY 572:doi.org/10.1016/j.palaeo.2021.110393

Authors' abstract: The rise and spread of tropical grasslands was a signal event in the Cenozoic, causing many ungulates to evolve adaptations to a diet of graminoid tissues, or graminivory. In parallel, a lineage of monkeys (Theropithecus) is distinguished among primates for its large size and commitment to graminivory, a trait expressed by species throughout the Plio-Pleistocene fossil record and T. gelada, the sole surviving species today.

An open question concerns the mechanics of how fossil species of Theropithecus handled graminoid tissues. They might have exhibited preference, selecting tissues within a given tuft, or they might have practiced indiscriminate bulk-feeding in a manner similar to large grazing ungulates.

To differentiate between these handling behaviors, we used time- and graminivore-calibrated carbon stable isotope values to show progressive reliance on high-throughput bulk-feeding graminivory. Variation in this behavior explains a significant amount of variation in body mass through time, and we describe these covarying traits, which peaked during the Pleistocene, as evolutionary traps.

To support this characterization, we report evidence of temporal increases in strontium isotope variability among North African theropiths, a result that suggests greater lifetime travel and energetic costs in response to diminishing

food resources, a probable factor in the extinction of T. oswaldi, the largest monkey that ever lived.

Speirs: Imagine a monkey (not an ape) the size of a cow, grazing on grains in the wild.

Smith, G.E., et al (2021) **If I fits I sits: A citizen science investigation into illusory contour susceptibility in domestic cats (Felis silvestris catus).** A P P L I E D A N I M A L B E H A V I O U R S C I E N C E 240:doi.org/10.1016/j.applanim.2021.105338

Authors' abstract: A well-known phenomenon to cat owners is the tendency of their cats to sit in enclosed spaces such as boxes, laundry baskets, and even shape outlines taped on the floor. This investigative study asks whether domestic cats (Felis silvestris catus) are also susceptible to sitting in enclosures that are illusory in nature, utilizing cats' attraction to box-like spaces to assess their perception of the Kanizsa square visual illusion.

Carried out during the COVID-19 pandemic, this study randomly assigned citizen science participants booklets of six randomized, counterbalanced daily stimuli to print out, prepare, and place on the floor in pairs. Owners observed and video-recorded their cats' behavior with the stimuli and reported findings from home over the course of the six daily trials.

This study ultimately reached over 500 pet cats and cat owners, and of those, 30 completed all of the study's trials. Of these, nine cat subjects selected at least one stimulus by sitting within the contours (illusory or otherwise) with all limbs for at least three seconds.

This study revealed that cats selected the Kanizsa illusion just as often as the square and more often than the control, indicating that domestic cats may treat the subjective Kanizsa contours as they do real contours.

Given the drawbacks of citizen science projects such as participant attrition, future research would benefit from replicating this study in controlled settings. To the best of our knowledge, this investigation is the first of its kind in three regards: a citizen science study of cat cognition; a formal examination into cats' attraction to 2D rather than 3D enclosures; and study into cats' susceptibility to illusory contours in an ecologically relevant paradigm.

This study demonstrates the potential of more ecologically valid study of pet cats, and more broadly provides an interesting new perspective into cat visual perception research.

Martinón-Torres, M., et al (2021) **Earliest known human burial in Africa.** NATURE 593:95-100

Authors' abstract: The origin and evolution of hominin mortuary practices are topics of intense interest and debate. Human burials dated to the Middle Stone Age (MSA) are exceedingly rare in Africa and unknown in East Africa. Here we describe the partial skeleton of a roughly 2.5- to 3.0-year-old child dating to 78.3 ± 4.1 thousand years ago, which was recovered in the MSA layers of Panga ya Saidi (PYS), a cave site in the tropical upland coast of Kenya.

Recent excavations have revealed a pit feature containing a child in a flexed position. Geochemical, granulometric and micromorphological analyses of the burial pit content and encasing archaeological layers indicate that the pit was deliberately excavated. Taphonomical evidence, such as the strict articulation or good anatomical association of the skeletal elements and histological evidence of putrefaction, support the in-place decomposition of the fresh body.

The presence of little or no displacement of the unstable joints during decomposition points to an interment in a filled space (grave earth), making the PYS finding the oldest known human burial in Africa.

The morphological assessment of the partial skeleton is consistent with its assignment to Homo sapiens, although the preservation of some primitive features in the dentition supports increasing evidence for non-gradual assembly of modern traits during the emergence of our species. The PYS burial sheds light on how MSA populations interacted with the dead.

Thompson, J.C., et al (2021) **Early human impacts and ecosystem reorganization in southern-central Africa.** SCIENCE ADVANCES 7:doi.org/10.1126/sciadv.abf9776 (available as a free pdf)

Authors' abstract: Modern Homo sapiens engage in substantial ecosystem modification, but it is difficult to detect the origins or early consequences of these behaviors. Archaeological, geochronological, geomorphological, and

paleoenvironmental data from northern Malawi document a changing relationship between forager presence, ecosystem organization, and alluvial fan formation in the Late Pleistocene.

Dense concentrations of Middle Stone Age artifacts and alluvial fan systems formed after ca. 92 thousand years ago, within a paleoecological context with no analog in the preceding half-million-year record. Archaeological data and principal coordinates analysis indicate that early anthropogenic fire relaxed seasonal constraints on ignitions, influencing vegetation composition and erosion.

This operated in tandem with climate-driven changes in precipitation to culminate in an ecological transition to an early, pre-agricultural anthropogenic landscape.

Modern humans act as powerful agents of ecosystem transformation. They have extensively and intentionally modified their environments for tens of millennia, leading to much debate about when and how the first human-dominated ecosystems arose. A growing body of archaeological and ethnographic evidence shows substantial, recursive interactions between foragers and their environments that suggest that these behaviors were fundamental to the evolution of our species.

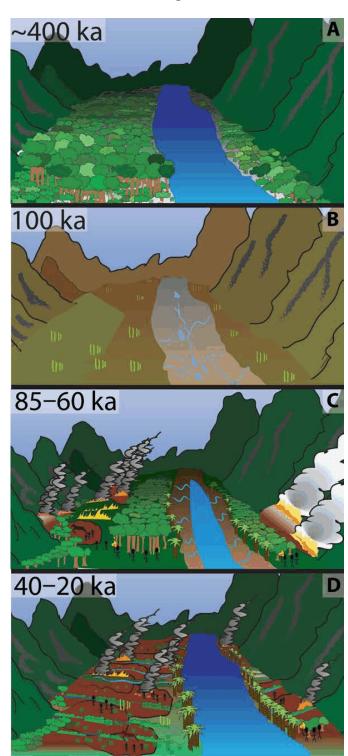
Fossil and genetic data indicate that Homo sapiens were present in Africa by ~315 thousand years (ka) ago, and archaeological data show notable increases in the complexity of behavior that took place across the continent within the past ~300- to 200-ka span at the end of the Middle Pleistocene (Chibanian).

Since our emergence as a species, humans have come to rely on technological innovation, seasonal scheduling, and complex social cooperation to thrive. These attributes have enabled us to exploit previously uninhabited or extreme environments and resources, so that today humans are the only pan-global animal species. Fire has played a key role in this transformation.

Biological models suggest that adaptations for cooked food extend back at least 2 million years, but regular archaeological evidence for controlled use of fire does not appear until the end of the Middle Pleistocene.

A marine core with a dust record drawn from a wide swath of the African continent shows that over the past million years, peaks in elemental carbon

occurred after ~400 ka, predominately during shifts from interglacial to glacial conditions, but also during the Holocene.



This suggests that fire was less common in sub-Saharan Africa before ~400 ka and that by the Holocene, there was a substantial anthropogenic contribution.

Fire is a tool that has been used by pastoralists to open and maintain grasslands throughout the Holocene.

However, detecting the contexts and ecological impacts of fire use by Pleistocene early hunter-gatherers is more complex.

Fire is known both ethnographically and archaeologically as an engineering

tool for resource manipulation, including improvement of subsistence returns or modification of raw materials, with these activities often associated with communal planning and requiring substantial ecological knowledge.

Landscape-scale fires allow hunter-gatherers to drive game, control pests, and enhance productivity of habitat. On-site fire facilitates cooking, warmth, predator defense, and social cohesion.

[Images are from this paper.]

Tsuneishi, M., et al (2021) Association between number of teeth and Alzheimer's disease using the National Database of Health Insurance Claims and Specific Health Checkups of Japan. PLOS ONE 16:doi.org/10.1371/journal.pone.0251056 (available as a free pdf)

Authors' abstract: Associations of numbers of teeth present and of missing teeth with Alzheimer's disease were cross-sectionally analyzed using the National Database of Health Insurance Claims and Specific Health Checkups of Japan.

Dental care claims data of patients aged 60 years or older diagnosed with periodontitis (n = 4,009,345) or missing teeth (n = 662,182) were used to obtain information about the numbers of teeth present and of missing teeth, respectively. They were combined with medical care claims data including the diagnosis of Alzheimer's disease.

Numbers of teeth present and of missing teeth excluding third molars were calculated using the dental formula in the claims for periodontitis and missing teeth, respectively, and categorized into three groups each.

Percentages of subjects treated for Alzheimer's disease with 20–28, 10–19, and 1–9 teeth present were 1.95%, 3.87%, and 6.86%, respectively, in patients diagnosed as having periodontitis, and those treated for Alzheimer's disease with 1–13, 14–27, and 28 missing teeth were 2.67%, 5.51%, and 8.70%, respectively, in patients diagnosed as having missing teeth.

In conclusion, the results of the present study using Japanese dental claims data showed that older people visiting dental offices with fewer teeth present and a greater number of missing teeth are more likely to have Alzheimer's disease.

Myrick, J.G., and J. Chen (2021) **Schadenfreude after watching the news: How audiences respond to media coverage of partisans disclosing illnesses.** JOURNALISM AND MASS COMMUNICATION QUARTERLY 98:doi.org/10.1177/10776990211008534

[Schadenfreude (pronounced shaw-den-froyd) is an excellent German word meaning to take joy in seeing other people's misfortunes.]

Authors' abstract: When public figures make announcements about their illness, audiences may be influenced to change their own health behaviors. However, if a disliked political figure becomes ill, feelings of schadenfreude, or pleasure at another's misfortune, may arise and schadenfreude could predict news consumer's information seeking and health-related intentions.

Surveys of audience responses to news of conservative radio host Rush Limbaugh's lung cancer diagnosis (N = 414) and to news of Republican Senator Rand Paul's COVID-19 diagnosis (N = 407) found that such illness announcements can evoke schadenfreude, with schadenfreude associated with decreased willingness to undertake preventative health behaviors.

Tremblay, J.C., and P.N. Ainslie (2021) **Global and country-level estimates of human population at high altitude.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 118:doi.org/10.1073/pnas.2102463118 (available as a free pdf)

Authors' abstract: Estimates of the global population of humans living at high altitude vary widely, and such data at the country level are unavailable. Herein, we use a geographic information system (GIS)-based approach to quantify human population at 500-metre elevation intervals for each country.

Based on georeferenced data for population (LandScan Global 2019) and elevation (Global Multiresolution Terrain Elevation Data), 500.3 million humans live at =1,500 m, 81.6 million at =2,500 m, and 14.4 million at =3,500 m.

Ethiopia has the largest absolute population at =1,500 m and =2,500 m, while China has the greatest at =3,500 m. Lesotho has the greatest percentage of its population above 1,500 m, while Bolivia has the greatest at =2,500 m and =3,500 m.

High altitude presents a myriad of environmental stresses that provoke physiological responses and adaptation, and consequently impact disease prevalence and severity.

While the majority of high-altitude physiology research is based upon lowlanders from western, educated, industrialized, rich, and democratic countries ascending to high altitude, the global population distribution of high-altitude residents encourages an increased emphasis on understanding high-altitude physiology, adaptation, epidemiology, and public health in the ~500 million permanent high-altitude residents.

Speirs: This paper caught my eye because Calgary is a mountain city. Our official altitude is just 1,035 metres, but that is measured at City Hall, which is on the floor of the Bow River valley. Add about 200 metres for those who live up on the plateau, such as myself, and another 200 metres on top of that for those who live in the western suburbs up in the Rocky Mountain foothills.

Nyberg, L., et al (2021) **Educational attainment does not influence brain aging.** PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA 118:doi.org/10.1073/pnas.2101644118 (available as a free pdf)

Authors' abstract: Education has been related to various advantageous lifetime outcomes. Here, using longitudinal structural MRI data (4,422 observations), we tested the influential hypothesis that higher education translates into slower rates of brain aging.

Cross-sectionally, education was modestly associated with regional cortical volume. However, despite marked mean atrophy in the cortex and hippocampus, education did not influence rates of change. The results were replicated across two independent samples. Our findings challenge the view that higher education slows brain aging.

Keidl, P.D. (2020) **The labor of curating: fandom, museums, and the value of fan heritage.** JOURNAL OF POPULAR CULTURE 54:407-431 (available as a free pdf)

Author's extracts: *Thomas Manglitz, co-founder of the fan-run museum1 Stars of the Galaxy in M€onchengladbach, Germany (hereafter SOTG). Housed in*

a former indoor swimming pool vacated by the city, SOTG displays production materials and merchandise from a variety of science fiction productions. However, the vast majority of the amateur museum's displays are dedicated to the Star Wars franchise, ranging from action figures to LEGO sets, replicas, and collectible figurines.

Because of this focus, SOTG has become a popular destination for local and regional press, as well as fellow fans, to interview Manglitz about Star Wars, including the history of the films, the success of the franchise's merchandise, its fan community, and the story behind the museum itself.

Although Manglitz himself frames the project as a hobby without any economic agenda in such reports, the curatorial work of the fans behind SOTG should not be considered as mere leisure. Rather, following Mel Stanfill's plea to study fan practices and projects through a labor framework and ask who benefits from these activities, fan curating should be acknowledged as a form of work that creates cultural and economic value for different agents.

Fan-run museums demonstrate how fandom has penetrated contemporary life beyond their respective fan communities and closed off spaces usually associated with fandom. They point to the on-ground labor that fans are performing in their respective communities, their direct environment, the heritage sector, and the media industries.

Nicewicz, A.W., et al (2021) **Antioxidant capacity of honey from the urban apiary: A comparison with honey from the rural apiary.** SCIENTIFIC REPORTS 11:doi.org/10.1038/s41598-021-89178-4 (available as a free pdf)

Authors' abstract: Honey is a source of natural antioxidant compounds exerting several health-beneficial effects. Since urban beekeeping is quite common, the fear among potential consumers about the quality and the safety of honey produced exclusively in the cities is observed. ... We described the antioxidant properties of linden honey from urban and rural areas.

The analysis showed that all tested parameters were significantly higher in honey from rural areas than in urban samples. The differences in the obtained results are certainly not the effect of the floral composition of honey, but rather due to the location of the honeybee colonies. It seems that the consumption of honey from urban areas for health purposes should be considered.

Honey from urban apiaries is not more polluted by heavy metals than honey from agricultural areas. Interestingly, honey's antioxidant properties from urban apiaries have not yet been deep tested, although they are important from the point of view of a potential consumer. ... Our findings suggest that the consumption of honey from urban areas for health purposes should be considered.

Liu, S., et al (2021) **Plastic waste to fuels by hydrocracking at mild conditions.** SCIENCE ADVANCES 7:doi.org/10.1126/sciadv.abf8283 (available as a free pdf)

Authors' abstract: Single-use plastics impose an enormous environmental threat, but their recycling, especially of polyolefins, has been proven challenging. We report a direct method to selectively convert polyolefins to branched, liquid fuels including diesel, jet, and gasoline-range hydrocarbons, with high yield up to 85% over Pt/WO3/ZrO2 and HY zeolite in hydrogen at temperatures as low as 225°C.

The process proceeds via tandem catalysis with initial activation of the polymer primarily over Pt, with subsequent cracking over the acid sites of WO3/ZrO2 and HY zeolite, isomerization over WO3/ZrO2 sites, and hydrogenation of olefin intermediates over Pt.

The process can be tuned to convert different common plastic wastes, including low- and high-density polyethylene, polypropylene, polystyrene, everyday polyethylene bottles and bags, and composite plastics to desirable fuels and light lubricants.